The original documents are located in Box 56, folder "1976/02/13 - Leonard Farrell, Hans Cherney, and Ralph Clark" of the James M. Cannon Files at the Gerald R. Ford Presidential Library.

Copyright Notice

The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted material. Gerald Ford donated to the United States of America his copyrights in all of his unpublished writings in National Archives collections. Works prepared by U.S. Government employees as part of their official duties are in the public domain. The copyrights to materials written by other individuals or organizations are presumed to remain with them. If you think any of the information displayed in the PDF is subject to a valid copyright claim, please contact the Gerald R. Ford Presidential Library.

Digitized from Box 56 of the James M. Cannon Files at the Gerald R. Ford Presidential Library

MEETING WITH LEONARD FARRELL,
HANS CHERNEY, RALPH CLARK

Friday, February 13, 1976
2:00 p.m.

As Passed by the Senate

COMMENTS ON S. 32 ~~(PRINT 6, JANUARY 19, 1976)~~

Four different parts of the bill present problems:

1. Section 204. Requirement for Federal science and technology funding forecasts, priorities and options.

. Principal Requirements are that:

- the new OSTP prepare forecasts of Federal funding for science, engineering and technology activities; priorities for funding among areas of science and technology; and options for funding levels and priorities.

- Options for funding levels and allocation among areas be furnished to OMB and (in accordance with section 208) be included in an annual report from the President to the Congress.

. Principal Objections are:

- There is no practicable way of projecting or forecasting desirable levels of Federal investment in scientific, engineering and technology programs apart from knowledge about requirements and projections of the overall programs (Federal and non-Federal) for meeting particular objectives -- e.g., transportation, health, defense objectives. Where it is appropriate, a part of the funds devoted to agency programs are spent for science & technology, but S&T funding levels must be considered in relation to funding for other activities for meeting the particular agency or national objectives, not treated in isolation.

- The Federal Government does not now nor should it attempt to develop a science and technology budget. There is no sound reason for attempting to shift from making decisions on the basis of objectives to decisions on the basis of means.

- Five year forecasts of investments for S&T activities, if mandated, would have to be limited, as a practical matter, to (a) run-out costs for commitments already made, and (b) perhaps level funding for "level of effort" programs. Compiling such information would not provide a meaningful or useful result.

- Recommendations made by a Presidential adviser should go to the President for consideration -- not to both

GERALD R. FORD LIBRARY

the President and the Congress -- which is the practical effect of combination of sections 204 and 208.

. Change needed to solve problems: Delete section 204 and the clause in 208 that references 204.

2. Section 208. Requirement for an annual Presidential Science, Engineering and Technology Report.

. Principal Requirement is for a broad report each year beginning February 15, 1977, from the President to the Congress.

. Principal Objections are that a broad annual report on virtually all aspects of science and technology -- rather than periodic reports on selected, timely subjects:

- would take up a large share of the OSTP staff time that should be devoted to advising on scientific and technical aspects of issues and problems requiring the President's attention.

- presents a virtually impossible task because science and technology are means to achive objectives in such areas as transportation, health, defense, etc., and cannot be separated out meaningfully from discussions of other aspects of total efforts to achieve those objectives.

. Preferred course of action: Change "annual" to "periodic" and make clear that report is to be highly selective --focusing only on the most important matters requiring the attention of the President and the Congress.

3. Title IV. Statutory Federal Coordinating Group for Science, Engineering and Technology.

. Principal Requirements:
- Creates an interagency coordinating group made up of representatives of departments and agencies with significant S&T activities.
- Abolishes the existing Federal Council on Science & Technology(FCST) which is created by an Executive Order (the words of which have been included in Title IV).

GERALD R. FORD LIBRARY

. Principal Objections:

- Unnecessarily creates by statute an interagency group that is indistinguishable from the existing FCST which is created by an Executive Order.

- There is no clear reason to take from the President the flexibility to change the organization, purpose, and membership of such a committee so that it can be shaped to meet needs as they arise and change. Freezing it in a law will not increase its contribution or effectiveness.

. Preferred action: Delete Title IV.

4. Title V. State and Regional Science & Technology Program.

. Principal provisions

- Creates a 59-man Intergovernmental Science, Engineering, and Technology Advisory Panel, with 1 member from each State, D.C. , etc, the Director of NSF and OSETP.

- Creates a new categorical grant program to provide science advisers in each state legislature and executive.

. Principal Objections:

- Creation of a statutory 59-member intergovernmental science and technology advisory group is unnecessary.

- The new categorical grant program to put new science advisory posts in each state is duplicative and amounts to excessive Federal meddling in states' organization and advisory matters.

  . NSF already has a major program for assisting state and local governments in making use of science and technology. Revenue sharing provides additional discretionary funds, if states wish to have science advisers.

  . Arrangements for science advisers to Governors have been tried under NSF's program and have not been uniformly successful. NSF is experimenting with other approaches.

- Title not directly related to principal purposes of bill.

. Corrective Action Necessary: Delete Title V.

GERALD R. FORD LIBRARY

As Passed by Senate

Changes - (P.P. 33, 36, 39, 42 60, 61)

[JOINT COMMITTEE PRINT NO. 6]

JANUARY 19, 1976

(Proposed amendment for the consideration of the Committees)

Calendar No.

94TH CONGRESS
1ST SESSION

S. 32

[Report No. 94–]

IN THE SENATE OF THE UNITED STATES

JANUARY 15, 1975

Mr. KENNEDY (for himself, Mr. MOSS, Mr. TUNNEY, Mr. BENTSEN, Mr. BROOKE, Mr. CANNON, Mr. CASE, Mr. CHURCH, Mr. CRANSTON, Mr. CULVER, Mr. GRAVEL, Mr. PHILIP A. HART, Mr. HATFIELD, Mr. HUMPHREY, Mr. INOUYE, Mr. JAVITS, Mr. JOHNSTON, Mr. LEAHY, Mr. MCGEE, Mr. MCGOVERN, Mr. MAGNUSON, Mr. MANSFIELD, Mr. METCALF, Mr. MONDALE, Mr. MONTOYA, Mr. MUSKIE, Mr. PELL, Mr. RANDOLPH, Mr. SPARKMAN, Mr. STAFFORD, Mr. WEICKER, and Mr. WILLIAMS) introduced the following bill; which was read twice and, by unanimous consent, referred to the Committees on Labor and Public Welfare, Commerce, and Aeronautical and Space Sciences

JANUARY , 1976

Reported by Mr. ----------, with an amendment

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

A BILL

To establish a framework for the formulation of national policy and priorities for science and technology, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

~~That this Act may be cited as the "National Policy and Priorities for Science and Technology Act of 1975".~~

GERALD R. FORD LIBRARY

~~STATEMENT OF FINDINGS AND DECLARATION OF POLICY~~

~~SEC. 2. (2) The Congress, recognizing the profound impact of science and technology on society, and the interrelations of scientific, technological, economic, social, political, and institutional factors, hereby finds that~~

~~(1) Federal funding for science and technology represents an investment in the future, which is indispensable to sustained national progress;~~

~~(2) the manpower pool of scientists and engineers constitutes an invaluable national resource which should be utilized to the maximum extent possible at all times;~~

~~(3) the scientific and technological capabilities within the United States, if properly applied and directed, could effectively assist in improving the quality of life and in anticipating and resolving many critical and emerging national problems;~~

~~(4) strong participation by State and local governments is essential to the successful solution of many civilian problems, and in developing programs for the application of science and technology to civilian needs and to setting civilian research and development activities priorities;~~

~~(5) the maintenance and strengthening of diversified scientific and technological capabilities in government, industry and the universities, and the encouragement of independent initiatives based on such capabilities,~~

~~are essential to the most effective use of science and technology in resolving critical and emerging national problems;~~

~~(6) a more systematic approach is needed to identify critical and emerging national problems and to analyze, plan, and coordinate Federal science and technology programs, policies, and activities intended to contribute to the resolution of such problems; and~~

~~(7) the effectiveness of scientific and technological contributions to improvements in the quality of life and the resolution of critical and emerging national problems depends on the maintenance of a strong base of knowledge in science and advanced technology together with a resource of highly qualified scientists and engineers.~~

~~(b) The Congress declares that it is the continuing policy and responsibility of the Federal Government to take appropriate measures directed toward achieving the following goals~~

~~(1) there must be a continuing Federal investment in science and technology adequate to the needs of the Nation;~~

~~(2) the level of this investment must be adjusted annually with regard to particular needs and opportunities and the prevalent economic situation;~~

~~(3) the Federal investment in science and technology must be allocated~~ annually among the priority needs ~~of the Nation, including~~ the need to ~~maintain the Nation's strength in basic research~~ and education in science ~~and engineering;~~

~~(4) scientists, engineers, and technicians must have continuing opportunities~~ for socially useful employment ~~in positions~~ commensurate with their professional, ~~technical capabilities; and~~

~~(5) the~~ National capabilities for technological ~~planning and policy formulation~~ must be strengthened.

~~(c) Therefore, it is declared~~ to be the purpose of ~~this Act to promote the effective application~~ of science ~~and technology to the furtherance~~ of national goals ~~by~~—

~~(1) establ~~ishing a Council of Advisers on ~~Science and Technology in the Executive Office of the President to provide a source of scientific~~ and technological ~~analysis and judgment to the President;~~

~~(2) establishing an Intergovernmental Science and Technology~~ Advisory Committee to ~~foster the application of~~ science and ~~technology to State and regional needs;~~

~~(3) establishing an~~ Interagency Federal ~~Coordinating Com~~mittee on ~~Science and Technology to coordinate~~ ~~agency~~ research and ~~development efforts; and~~

~~(4) having the President submit an annual Science and Technology Report to the Congress.~~

~~TITLE I—COUNCIL OF ADVISERS ON SCIENCE AND TECHNOLOGY~~

~~ESTABLISHMENT OF COUNCIL~~

~~SEC. 101. (a) There is established in the Executive Office of the President a Council of Advisers on Science and Technology (hereinafter referred to as the "Council"). The Council shall be composed of three members who shall be appointed by the President, by and with the advice and consent of the Senate from among individuals who, by reason of their training, experience, and attainments, are exceptionally qualified to analyze and interpret scientific and technological development; to appraise~~ and recommend ~~programs, policies, and activities of the Federal Government in the light of the policy declared in section 2; and are sensitive to the economic, social, esthetic, and cultural needs and interests of the Nation.~~

~~(b) The President shall designate one of the members of the Council as Chairman and one as Vice Chairman, who shall act as Chairman in the absence of the Chairman.~~

~~(c) Members of the Council shall serve full time and the Chairman of the Council shall be compensated at the rate provided for~~ level II of the Executive ~~Schedule (5 U.S.C. 5313). The other members of the Council shall be~~

compensated at the rate provided for level IV of the Executive Schedule (5 U.S.C. 5315).

(d) The Council may employ such officers and employees as may be necessary to carry out its functions under this Act. In addition, the Council may employ and fix the compensation of such experts and consultants as may be necessary for the carrying out of its functions under this Act, in accordance with section 3109 of title 5, United States Code (but without regard to the last sentence thereof).

(e) The Council shall have the authority, within the limits of available appropriations, to enter into contracts or other arrangements for the carrying out by organizations or individuals, including other Government agencies, of such activities as the Council deems necessary to carry out the purposes of this Act.

FEDERAL INVESTMENT IN SCIENCE AND TECHNOLOGY

SEC. 102. (a) The Council shall annually appraise progress in science and technology in relation to the needs of the Nation and, taking account of the state of the economy through consultation with the Council of Economic Advisers, shall determine the desired level of Federal investment in science and technology for the fiscal year immediately following the fiscal year in which such determination is made.

(b) On the basis of such determination, the Council shall make appropriate recommendations to the President and the

Congress regarding the desired level of Federal investment in science and technology for the fiscal year immediately following the fiscal year in which such recommendations are made.

SCIENCE AND TECHNOLOGY PRIORITIES

SEC. 103. (a) The Council shall annually assess alternative uses of Federal funds for science and technology in relation to scientific and technical opportunities and national needs, and on the basis thereof shall determine a set of priorities for allocating Federal funds among major expenditure areas in science and technology, which pertain to the fiscal year immediately following the fiscal year in which such determination is made.

(b) On the basis of such determination, the Council shall make appropriate recommendations to the President and the Congress regarding such priorities.

SCIENCE AND TECHNOLOGY POLICY ANALYSIS AND PLANNING

SEC. 104. (a) The Council shall serve as a source of scientific and technological analysis and judgment for the President with respect to major policies, plans, and programs of science and technology of the Federal Government. In carrying out this function, the Council shall—

(1) seek to define a coherent approach for applying science and technology to critical and emerging national problems and for coordinating the scientific and techno-

logical responsibilities and programs of the Federal departments and agencies in the resolution of such problems;

(2) assist and advise the President in the preparation of the Science and Technology Report, in accordance with section 108 of this title;

(3) gather timely and authoritative information concerning significant developments and trends in science, technology, and in national priorities, both current and prospective, to analyze and interpret such information for the purpose of determining whether such developments and trends are interfering, or are likely to interfere, with the achievement of the policy set forth in section 2 of this Act;

(4) initiate studies and analyses, including systems analyses and technology assessments of alternatives available for the resolution of critical and emerging national problems amenable to the contributions of science and technology and, insofar as possible, determine and compare probable costs, benefits, and impacts of these alternatives;

(5) review and appraise the various programs, policies, and activities of the Federal Government in the light of the policy set forth in section 2 of this Act for the purpose of determining the extent to which such programs, policies, and activities are contributing to the achievement of such policy, and to make recommendations to the President with respect thereto;

(6) report at least once each year to the President on the overall activities and accomplishments of the Council, pursuant to section 108 of this title; and

(7) perform other duties and functions and make and furnish such studies, reports thereon, and recommendations with respect to matters of policy and legislation as the President may request.

FUNCTIONS OF THE CHAIRMAN

SEC. 105. The Chairman of the Council shall, in addition to the other duties and functions set forth in this title—

(1) serve as the Science and Technology Adviser to the President;

(2) serve as Chairman of the Federal Coordinating Committee for Science and Technology established under title II of this Act;

(3) appoint, assign the duties, and fix the compensation of personnel without regard to the provisions of title 5, United States Code, governing appointments in the competitive service, and without regard to the provisions of chapter 51 and subchapter III of chapter 53 of such title, relating to classification and General Sched-

ule pay rates, at rates not in excess of the rate prescribed for GS–18 of the General Schedule under section 5332 of such title; and

(4) perform such other duties and functions as the President may request.

COORDINATION WITH OTHER ORGANIZATIONS

SEC. 106. (a) In exercising its powers, functions, and duties under this title, the Council shall—

(1) work in close consultation and cooperation with the heads of the Federal departments and agencies;

(2) utilize the services of consultants, establish such advisory committees, and, to the extent practicable, consult with State and local governmental agencies, with appropriate professional groups, and with such representatives of industry, the universities, agriculture, labor, consumers, conservation organizations, and other groups, organizations and individuals as it may deem advisable;

(3) hold such hearings in various parts of the Nation as the Council deems necessary, to determine the views of such agencies, groups, and organizations referred to in paragraph (2) of this subsection and of the general public, concerning trends in science and technology; and

(4) utilize to the fullest extent possible the existing services, facilities, and information (including statistical

information) of public and private agencies and organizations, and individuals, in order that duplication of effort and expense may be avoided.

(b) Each department, agency, and instrumentality of the executive branch of the Government, including any independent agency, is authorized to furnish the Council such information as the Council deems necessary to carry out its function under this title.

(c) Upon request, the Administrator of the National Aeronautics and Space Administration is authorized to assist the Council with respect to carrying out its activities conducted under paragraph (4) of subsection 104(a) of this title.

STUDY OF FEDERAL ORGANIZATION FOR SCIENCE AND TECHNOLOGY

SEC. 107. (a) Not later than ninety days following appointment of the Council members, the Council shall contract with the National Academy of Sciences to conduct a study in order to recommend improvements in the Federal organization for civilian science and technology.

(b) Such contract shall contain provisions to assure that the study takes adequate account of the impact of Federal scientific and technical programs on—

(1) the generation of scientific and technical knowledge;

(2) the utilization of such knowledge in dealing with economic and social problems and opportunities;

(3) the utilization and enhancement of the Nation's scientific and technical manpower and resources;

(4) the strength of the economy, both domestically and internationally;

(5) the quality of the environment; and

(6) the interests of individuals and groups that may be affected by Federal scientific and technical programs.

(c) The study shall include, without being limited to—

(1) examination and appraisal of the existing Federal organization for civilian science and technology;

(2) consideration of possible improvements in such organization; and

(3) consideration of the establishment of such new departments, agencies, offices, or other organizations as may serve to strengthen the Nation's scientific and technical enterprise and increase the effectiveness of its application to the solution of national problems.

(d) In conducting its study, the Academy shall make maximum feasible use of related investigations and studies conducted by public and private agencies, including congressional hearings and reports.

(e) The Academy shall transmit to the Council not later than eighteen months after the starting date of the contract,

a final report, containing detailed statements of the findings and conclusions of the Academy, together with its recommendations for improvements in the Federal organization for civilian science and technology.

SCIENCE AND TECHNOLOGY REPORT

SEC. 108. (a) The President shall transmit annually to the Congress, beginning October 15, 1976, a Science and Technology Report (hereinafter referred to as the "Report"), which shall set forth—

(1) a review of developments of national significance in science and technology, including, but not limited to, the mathematical, physical, social, and life sciences, and civil, chemical, electrical, and mechanical engineering, and other technologies;

(2) the significant effects of current and foreseeable trends in science and technology on the social, economic, and other requirements of the Nation;

(3) a review and appraisal of selected science and technology related programs, policies, and activities of the Federal Government;

(4) an inventory and projection of critical and emerging national problems the resolution of which might be substantially assisted by the application of science and technology;

(5) the identification and assessment of scientific and technological measures that can contribute to the resolution of such problems, in light of the related social, economic, political, and institutional considerations;

(6) the existing and projected scientific and technological resources, including specialized manpower, that could contribute to the resolution of such problems;

(7) recommendations for legislation on science and technology-related programs and policies that will contribute to the resolution of such problems.

(8) recommendations with regard to Federal investment level and priorities in science and technology, as made by the Council pursuant to sections 102 and 103 of this title.

(b) The Council shall insure that the report is printed and made available as a public document.

(c) If the recommendations in the report regarding Federal investment level and priorities in science and technology are substantially different from those submitted by the Council to the President, then the report shall include an appendix containing the original recommendations of the Council to the President, along with the Council's supporting justification and the reasons why the President did not accept the recommendations as submitted.

TITLE II—FEDERAL COORDINATING COMMITTEE FOR SCIENCE AND TECHNOLOGY

ESTABLISHMENT AND FUNCTIONS OF FEDERAL COORDINATING COMMITTEE FOR SCIENCE AND TECHNOLOGY

SEC. 201. (a) There is established the Federal Coordinating Committee for Science and Technology (hereinafter referred to as the "Committee").

(b) The Committee shall be composed of the Chairman of the Council of Advisers on Science and Technology and one representative of each of the following: Department of Agriculture, Department of Commerce, Department of Defense, Department of Health, Education, and Welfare, Department of Housing and Urban Development, Department of the Interior, Department of State, Department of Transportation, Veterans Administration, Atomic Energy Commission, National Aeronautics and Space Administration, National Science Foundation, Environmental Protection Agency, and Energy Research and Development Agency. Each such representative shall be an official of policy rank designated by the head of the Federal agency concerned.

(c) The Chairman of the Council of Advisers on Science and Technology shall serve as Chairman of the Committee. The Chairman may make provision for another

member of the Council to act temporarily as Chairman of the Committee.

(d) The Chairman (1) may request the head of any Federal agency not named in subsection (b) of this section to designate a representative to participate in meetings or parts of meetings of the Committee concerned with matters of substantial interest to such agency, and (2) may invite other persons to attend meetings of the Committee.

(e) The Committee shall consider problems and developments in the fields of science and technology and related activities affecting more than one Federal agency, and shall recommend policies and other measures—

(1) to provide more effective planning and administration of Federal scientific and technological programs,

(2) to identify research needs including areas of research requiring additional emphasis,

(3) to achieve more effective utilization of the scientific and technological resources and facilities of Federal agencies, including the elimination of unnecessary duplication, and

(4) to further international cooperation in science and technology.

(f) The Committee shall perform such other related

duties as shall be assigned, consonant with law, by the President or by the Chairman.

(g) For the purpose of effectuating this section, each Federal agency represented on the Committee shall furnish necessary assistance to the Committee in accordance with section 214 of the Act of May 3, 1945 (59 Stat. 134; 31 U.S.C. 691). Such assistance may include—

(1) detailing employees to the Committee to perform such functions, consistent with the purposes of this section, as the Chairman may assign to them, and

(2) undertaking, upon request of the Chairman, such special studies for the Committee as come within the functions herein assigned to the Committee.

(h) For the purpose of conducting studies and making reports as directed by the Chairman, standing subcommittees and panels of the Committee may be established in consonance with the provisions of section 214 of the Act of May 3, 1945 (59 Stat. 134; 31 U.S.C. 691).

ABOLITION OF FEDERAL COUNCIL FOR SCIENCE AND TECHNOLOGY

SEC. 202. The Federal Council for Science and Technology established pursuant to Executive Order 10807, dated

March 13, 1959, as amended by Executive Order 11381, dated November 8, 1967, is hereby abolished.

TITLE III—NATIONAL SCIENCE FOUNDATION

NATIONAL SCIENCE POLICY

SEC. 301. Section 3 (d) of the National Science Foundation Act of 1950 is amended to read as follows:

"(d) The foundation shall recommend and encourage the pursuit of national policies designed to foster research and education in science and engineering, and the application of scientific and technical knowledge to the solution of national problems."

NATIONAL SCIENCE BOARD

SEC. 302. Section 4 of the National Science Foundation Act of 1950 is amended—

(1) by inserting before the period at the end of subsection (a) a comma and the following: "within the framework of applicable national policies as set forth by the President and the Congress" and

(2) by striking out subsection (c) and inserting in lieu thereof the following:

"(c) The persons nominated for appointment as members of the Board (1) shall be eminent in the fields of science, social science, engineering, agriculture, industry, education, or public affairs, (2) shall be selected solely on the basis of established records of distinguished service, and (3) shall be

so selected as to provide representation of the views of leaders from a diversity of fields from all areas of the Nation. The President is requested, in the making of nominations of persons for appointment as members, to give due consideration to any recommendations for nomination which may be submitted to him by the National Academy of Sciences, the National Academy of Engineering, the National Association of State Universities and Land-Grant Colleges, the Sea Grant Association, the Association of American Universities, the Association of American Colleges, the Association of State Colleges and Universities, or by other scientific, technical, public interest or educational associations."

ASSISTANCE TO COUNCIL

SEC. 303. In order to carry out the purposes of this Act, the National Science Foundation is authorized to—

(1) gather and analyze information regarding Federal expenditures for research and engineering activities, and the employment and availability of scientific, engineering, and technical manpower, which the Foundation has assembled pursuant to paragraphs (1), (5), (6), and (7) of section 3 (a) of the National Science Foundation Act of 1950 in order to appraise the implementation of the policies set forth in section 2 of this Act;

(2) provide such information and appraisals to the Council of Advisers on Science and Technology; and

GERALD R. FORD LIBRARY

(3) provide such additional information and staff assistance to the Council of Advisers on Science and Technology as the Council may request.

CONTINUING EDUCATION IN SCIENCE AND ENGINEERING

SEC. 304. (a) Not later than ninety days following enactment of this Act, the National Science Foundation shall initiate an educational program of continuing education in science and engineering in order to enable scientists and engineers who have been engaged in their careers for at least five years to pursue courses of study designed to—

(1) provide them with new knowledge, techniques, and skills in their special fields; or

(2) acquire new knowledge, techniques, and skills in other fields which will enable them to render more valuable contributions to the Nation.

(b) The program developed under this section shall include, but not be limited to—

(1) the development of special curriculums and education techniques for continuing education in science and technology; and

(2) the award of fellowships to scientists and engineers to enable them to pursue courses of study which provide continuing education in science and engineering.

(c) From funds available pursuant to section 502, the

Foundation is authorized to make grants to, and to enter into contracts with, institutions of higher education and other academic institutions, nonprofit institutes and organizations, and private business firms, for the purpose of developing courses and curriculums specially designed for continuing education in science and technology under this section.

(d) (1) From funds available pursuant to section 502 the Foundation is authorized to award continuing education fellowships to scientists and engineers to enable them to pursue appropriate courses of study.

(2) The Foundation shall allocate fellowships under this subsection in such manner, insofar as practicable, as will—

(A) attract highly qualified applicants; and

(B) provide an equitable distribution of such fellowships throughout the United States.

(3) The Foundation shall pay to persons awarded fellowships under this section such stipends (including such allowances for subsistence, health insurance, relocation expenses, and other expenses for such persons and their dependents) as it may prescribe by regulation designed to accomplish the purposes of this Act.

(4) Fellowships shall be awarded under this section upon application made at such times and containing such information as the Foundation shall by regulation require,

~~TITLE IV—STATE AND REGIONAL SCIENCE AND TECHNOLOGY PROGRAMS~~

~~ESTABLISHMENT OF INTERGOVERNMENTAL SCIENCE AND TECHNOLOGY ADVISORY PROGRAMS~~

~~SEC. 401. (a) There is established in the National Science Foundation an Intergovernmental Science and Technology Advisory Committee.~~

~~(b) The Committee shall be composed of twenty-two members to be appointed as follows:~~

~~(1) Twenty members, two from each of the standard Federal regions, shall be appointed by the President, by and with the advice and consent of the Senate;~~

~~(2) A member of the Council selected by the Chairman of the Council; and~~

~~(3) The Director of the Foundation.~~

~~In making appointments under clause (1) of this subsection, the President is requested to consider the appointment of individuals, who, by reason of education, experience, or interest, are especially qualified to serve on the Committee and to give due consideration to nominations received from the Council of State Governments, National Governors' Conference, National Conference of State Legislatures, International City Management Association, National League of Cities/United States Conference of Mayors, National Association of County Officials, and other public interest organizations.~~

~~(c) The term of office of each member of the Committee appointed under clause (1) of subsection (b) shall be three years; except that—~~

~~(1) the members first taking office shall serve as designated by the President, six for a term of one year, eight for a term of two years, and six for a term of three years; and~~

~~(2) any member appointed to fill a vacancy occurring prior to the expiration of the term to which his predecessor was appointed shall be appointed for the remainder of such term.~~

~~(3) Each appointed member of the Committee shall, while serving on business of the Committee, be entitled to receive compensation at a rate not to exceed the daily rate prescribed for GS-18 of the General Schedule under section 5332 of title 5, United States Code, including traveltime, and while so serving away from his home or regular place of business he may be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as the expenses authorized by section 5703(b) of title 5, United States Code, for persons in Government service employed intermittently.~~

FUNCTIONS OF THE COMMITTEE

SEC. 402. (a) The Committee shall advise and assist the Foundation in—

(1) identifying and defining civilian problems at the State, regional, and local levels and the environment in which solutions to these problems ought to be provided;

(2) identifying areas of highest priority for study, assessment, and development of policy alternatives by the Foundation under this title; and

(3) identifying and fostering ways to facilitate the transfer and utilization of results of civilian research and development activities so as to maximize the application of science and technology to civilian needs.

(b) The Committee is authorized to—

(1) assist the Director of the Foundation, as appropriate, in taking account of State and regional needs and opportunities in the formulation of the Foundation's plans and programs;

(2) assist the States, including the furnishing of technical assistance, in establishing State science advisory programs pursuant to section 404;

(3) develop and furnish to the States, at their request, advisory guidelines for the formulation of civilian

research and development priorities within each State and within each standard Federal region;

(4) review and evaluate the effectiveness of programs and activities assisted under this title; and

(5) prepare and furnish to the Director of the Foundation for incorporation into the annual report of the Foundation to the Congress, a report of the activities of the Committee under this title, together with such recommendations, including recommendations for additional legislation, as the Committee deems appropriate.

(c) (1) The Committee shall annually elect a Chairman from among its regional members.

(2) The Committee shall meet at the call of the Chairman, but not less than four times a year.

(3) The Foundation shall make available to the Committee such information and assistance as may be required to carry out its functions under this section.

ADMINISTRATIVE PROVISIONS

SEC. 403. (a) Subject to such rules and regulations as may be adopted by the Committee, the Chairman shall have the power to—

(1) appoint and fix the compensation of an executive director, and such additional staff personnel as he deems necessary, without regard to the provisions of title 5, United States Code, governing appointments in the com-

petitive service, and without regard to the provisions of chapter 51 and subchapter III of chapter 53 of such title relating to classification and General Schedule pay rates, but at rates not in excess of the maximum rate for GS-18 of the General Schedule under section 5332 of such title, and

(2) procure temporary and intermittent services to the same extent as is authorized by section 3109 of title 5, United States Code.

(b) Each department, agency, and instrumentality of the executive branch of the Government, including independent agencies, is authorized and directed to furnish to the Committee, upon request made by the Chairman or Vice Chairman, such information as the Committee deems necessary to carry out its functions under this title.

GRANTS FOR STATE SCIENCE AND TECHNOLOGY PROGRAMS

SEC. 404. (a) The Director of the National Science Foundation, after consultation with the Intergovernmental Science and Technology Advisory Committee, is authorized to make grants of not to exceed $100,000 to any State to pay a part of the cost of establishing an Office of State Science and Technology.

(b) No grant may be made under this section unless an application is submitted at such time in such manner and containing or accompanied by such information as the

Director after consultation with the Committee requires. Each such application shall contain provisions to assure that—

(1) the office for which assistance is sought under the application will (A) be headed by an official who by reason of education and experience is qualified to advise the chief executive of the State and other State and local public officials on the application of science and technology to civilian needs relating to that State or locality and (B) have sufficient authority consistent with State law to carry out any functions assigned to that office pursuant to this title; and

(2) the State will assume the cost of the office established pursuant to this title no later than two years after the year in which the application is made.

(c) The Director shall approve any application which meets the requirements of subsection (b), and shall not disapprove any application without affording an opportunity for a hearing.

TITLE V—GENERAL PROVISIONS

DEFINITIONS

SEC. 501. As used in this Act:

(1) The term "Council" means the Council of Advisers on Science and Technology.

~~(2) The term "Foundation" means the National Science Foundation.~~

~~(3) The term "State" means each of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Trust Territory of the Pacific Islands.~~

~~(4) The term "standard Federal region" means each of the following regions:~~

~~(A) Region I: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.~~

~~(B) Region II: the Commonwealth of Puerto Rico, New Jersey, New York, and the Virgin Islands.~~

~~(C) Region III: Delaware, the District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia.~~

~~(D) Region IV: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.~~

~~(E) Region V: Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin.~~

~~(F) Region VI: Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.~~

~~(G) Region VII: Iowa, Kansas, Missouri, and Nebraska.~~

~~(H) Region VIII: Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming.~~

~~(I) Region IX: Arizona, California, Hawaii, and Nevada.~~

~~(J) Region X: Alaska, Idaho, Oregon, and Washington.~~

~~AUTHORIZATION OF APPROPRIATIONS~~

~~SEC. 502. (a) There are authorized to be appropriated $8,000,000 for the fiscal year ending June 30, 1976, of which $1,500,000 shall be available to carry out the provisions of section 107 of title I, $2,500,000 shall be available to carry out the other provisions of title I, $1,500,000 shall be available to carry out the provisions of title III, and $2,500,000 shall be available to carry out the provisions of title IV; and~~ $14,000,000 ~~for the fiscal year ending June 30, 1977, of which $5,000,000~~ shall be ~~available to carry out the provisions of title I, $3,500,000 shall~~ be ~~available to carry out the provisions~~ of title ~~III, and $5,500,000 shall be available to carry out the provisions~~ of title IV.

~~(b) Funds appropriated pursuant to subsection~~ (a) of ~~this section shall remain available for obligation, for expenditure, or for obligation and expenditure, for such~~ period or ~~periods as may be specified in Acts making such appropriations.~~

That this Act may be cited as the "National Policy, Organization, and Priorities for Science, Engineering, and Technology Act of 1976".

TITLE I—NATIONAL SCIENCE, ENGINEERING, AND TECHNOLOGY POLICY AND PRIORITIES

FINDINGS

SEC. 101. The Congress, recognizing the profound impact of science, engineering, and technology on society, and the interrelations of scientific, engineering, technological, economic, social, political, international, and institutional factors, hereby finds that—

(1) Federal funding for science, engineering, and technology represents an investment in the future which is indispensable to sustained national progress and human betterment;

(2) the manpower pool of scientists, engineers, and technicians constitutes an invaluable national resource which should be utilized to the fullest extent possible;

(3) the scientific, engineering, and technological capabilities within the United States, when properly fostered, applied, and directed, can effectively assist in improving the quality of life, in anticipating and resolving many critical and emerging international, national, and local problems, in strengthening America's

international economic competitive position, and in furthering the Nation's foreign policy objectives;

(4) strong participation by State and local governments is essential to the successful solution of many civilian problems, and in developing programs for the application of science, engineering, and technology to civilian needs and to setting priorities for civilian research and development activities;

(5) the widespread influence of technology in society requires sound planning and management to meet human needs;

(6) the maintenance and strengthening of diversified scientific, engineering, and technological capabilities in government, industry, and the universities, and the encouragement of independent initiatives based on such capabilities, are essential to the most effective use of science, engineering, and technology in resolving critical and emerging national problems;

(7) a systematic approach is needed to identify and anticipate critical and emerging national problems and to analyze, plan, and coordinate Federal science, engineering, and technology programs, policies, and activities intended to contribute to the resolution of such problems, including long-range, inclusive planning as well as intermediate and short-range program development; and

(8) the effectiveness of scientific, engineering, and technological contributions to the achievement of national goals depends on the maintenance of a strong base of knowledge in science, engineering, and advanced technology together with a resource of highly qualified scientists and engineers.

DECLARATION OF POLICIES AND PRIORITIES

SEC. 102. The Congress declares that it is the continuing policy and responsibility of the Federal Government to take appropriate measures to achieve the following goals:

(1) There must be a continuing national investment in science, engineering, and technology adequate to the needs of the Nation.

(2) The level of this investment must be commensurate with national needs and opportunities and the prevalent economic situation.

(3) The Federal Government must promote the effective and efficient utilization in the national interest of the Nation's human resources in science, engineering, and technology.

(4) The Nation's capabilities for technology assessment and for technological planning and policy formulation must be strengthened at both Federal and State levels.

(5) The Federal investment in science, engineering,

and technology must be used to help meet the priority needs of the Nation, including but not limited to—

(A) maintaining the Nation's strength in basic and applied research and education in science and engineering;

(B) assuring widespread dissemination of scientific, engineering, and technical knowledge;

(C) utilizing science, engineering, and technology in support of the Nation's domestic and foreign policy goals;

(D) promoting the conservation and efficient utilization of the Nation's natural and human resources;

(E) providing for the protection of the oceans and the coastal zones, and the efficient utilization of their resources;

(F) strengthening the economy and promoting full employment through useful technological innovations;

(G) assuring an adequate supply of food, materials, and energy for the Nation's needs;

(H) strengthening the national security;

(I) improving the quality of health care available to all United States citizens;

(J) improving the Nation's transportation and communication services;

(K) increasing the quality of educational opportunities available to all United States citizens;

(L) assuring the provision of effective public services throughout urban, suburban, and rural areas in fields such as public safety, firefighting, and sanitation;

(M) developing high-quality, low-cost housing systems;

(N) eliminating air and water pollution and unnecessary, unhealthful, or ineffective drugs and food additives; and

(O) enhancing the quality of the environment.

DECLARATION OF PURPOSE

SEC. 103. It is declared to be the purpose of this Act to promote the effective application of science, engineering, and technology to the furtherance of national goals by—

(1) establishing, in the Executive Office of the President, an Office of Science, Engineering, and Technology Policy to provide a continuing source of science, engineering, and technology policy analysis and judgment to the President;

(2) establishing a State and Regional Science, Engineering, and Technology Program to foster the application of science, engineering, and technology to State and regional needs;

(3) establishing an Interagency Federal Coordinating Group on Science, Engineering, and Technology to coordinate agency research and development efforts; and

(4) having the President submit an annual Science, Engineering, and Technology Report to the Congress.

TITLE II—OFFICE OF SCIENCE, ENGINEERING, AND TECHNOLOGY POLICY

ESTABLISHMENT

SEC. 201. There is established in the Executive Office of the President an Office of Science, Engineering, and Technology Policy (hereinafter referred to as the "Office").

DIRECTOR

SEC. 202. (a) The Office shall be administered by a Director who shall be appointed by the President, by and with the advice and consent of the Senate, and who shall be compensated at the rate provided for level II of the Executive Schedule in section 5313 of title 5, United States Code.

(b) The President shall choose a Director from among individuals who (1) by reason of their training, experience, and attainments, are exceptionally qualified to analyze and interpret the implications of scientific, engineering, and tech-

nological development and to appraise and recommend programs, policies, and activities of the Federal Government in the light of the policies and priorities set forth in section 102 of this Act; and (2) are sensitive to the economic, social, esthetic, and cultural needs and interests of the Nation.

ASSOCIATE DIRECTORS

SEC. 203. (a) The President is authorized to appoint not to exceed four Associate Directors, by and with the advice and consent of the Senate, and who shall be compensated at a rate not to exceed level III of the Executive Schedule in section 5314 of title 5, United States Code.

(b) Any Associate Director appointed by the President shall be chosen from among individuals who (1) by reason of their training, experience, and attainments, are exceptionally qualified to analyze and interpret the implications of scientific, engineering, and technological development and to appraise and recommend programs, policies, and activities of the Federal Government in the light of the policies and priorities set forth in section 102 of this Act; and (2) are sensitive to the economic, social, esthetic, and cultural needs and interests of the Nation.

(c) Any Associate Director appointed by the President shall perform such functions as the Director may from time to time prescribe.

FEDERAL INVESTMENT AND PRIORITIES

SEC. 204. (a)(1) Within its first year of operation, the Office shall, to the extent practicable, within the limitations of available knowledge and resources, prepare a five-year forecast of estimated levels of Federal investment in science, engineering, and technology in accordance with established national policies and priorities, including those policies and priorities declared in section 102 of this Act.

(2) The forecast shall include estimates, for each year included in the forecast, of the allocation of Federal funds among major expenditure areas in science, engineering, and technology.

(b) The Office shall annually revise the five-year forecast developed under subsection (a) of this section so that it takes appropriate account of changing national needs and circumstances, and extend the forecast so that it always extends five years into the future.

(c) The Office shall annually appraise progress in science, engineering, and technology in relation to the needs of the Nation and the five-year forecasts developed under subsections (a) and (b) of this section and shall estimate a range of options for various levels of Federal investment in science, engineering, and technology for the fiscal year immediately following the fiscal year in which such estimates

are made, including among the options that level of Federal investment which would assure optimum utilization of the Nation's science, engineering, and technology resources.

(d) The Office shall annually assess alternative uses of Federal funds for science, engineering, and technology in relation to scientific, engineering, and technical opportunities and national needs and the five-year forecasts developed under subsections (a) and (b) of this section, and on the basis thereof shall prepare a range of priority options for allocating Federal funds among major expenditure areas in science, engineering, and technology, which pertain to the fiscal year immediately following the fiscal year in which such priorities are prepared.

(e) The Director shall furnish the options prepared under subsections (c) and (d) of this section, together with necessary supporting analyses and data, to the Office of Management and Budget for use in developing budget recommendations to the President.

POLICY PLANNING, ANALYSIS, AND ADVICE

SEC. 205. The Office shall serve as a source of scientific, engineering, and technological analysis and judgment for the President with respect to major policies, plans, and programs of the Federal Government. In carrying out this function, the Director shall—

(1) seek to define coherent approaches for applying science, engineering, and technology to critical and emerging national and international problems and for promoting coordination of the scientific, engineering, and technological responsibilities and programs of the Federal departments and agencies in the resolution of such problems;

(2) assist and advise the President in the preparation of the Science, Engineering, and Technology Report, in accordance with section 208 of this ~~title~~ Act;

(3) gather timely and authoritative information concerning significant developments and trends in science, engineering, technology, and in national priorities, both current and prospective, to analyze and interpret such information for the purpose of determining whether such developments and trends are likely to affect achievement of the priority needs set forth in section 102(5) of this Act;

(4) encourage the development and maintenance of an adequate data base for human resources in science, engineering, and technology, including the development of appropriate models to forecast future manpower requirements, and assess the impact of major govern-

GERALD R. FORD LIBRARY

mental and public programs on human resources and their utilization;

(5) initiate studies and analyses, including systems analyses and technology assessments, of alternatives available for the resolution of critical and emerging national and international problems amenable to the contributions of science, engineering, and technology and, insofar as possible, determine and compare probable costs, benefits, and impacts of such alternatives;

(6) advise the President on the extent to which the various scientific and technical programs, policies, and activities of the Federal Government are likely to affect the achievement of the priority needs of the Nation as set forth in section 102(5) of this Act;

(7) provide the President with periodic reviews of Federal statutes and administrative regulations of the various departments and agencies which affect research and development activities, both internally and in relation to the private sector, or which may interfere with desirable technological innovation, together with recommendations for their elimination, reform, or updating as appropriate;

(8) develop, review, revise, and recommend criteria for determining scientific, engineering, and technological activities warranting Federal support, and recommend

Federal policies designed to advance (A) the development and maintenance of broadly based scientific, engineering, and technological capabilities, including human resources, at all levels of government, academia, and industry, and (B) the effective application of such capabilities to national needs;

(9) assess and advise on policies for international cooperation in science, engineering, and technology which will advance the national and international objectives of the United States;

(10) identify and assess emerging and future areas in which science, engineering, and technology can be used effectively in addressing national and international problems;

(11) report at least once each year to the President on the overall activities and accomplishments of the Office, pursuant to section 208 of this Act; and

(12) perform such other duties and functions and make and furnish such studies and reports thereon, and recommendations with respect to matters of policy and legislation as the President may request.

ADDITIONAL FUNCTIONS OF THE DIRECTOR

SEC. 206. (a) The Director shall, in addition to the other duties and functions set forth in this title—

(1) serve as Chairman of the Federal Coordinating

Group for Science, Engineering, and Technology established under title IV;

(2) serve as a member of the Domestic Council; and

(3) serve as a member of the Intergovernmental Science, Engineering, and Technology Advisory Panel established under title VI of this Act.

(b) For the purpose of assuring the optimum contribution of science, engineering, and technology to the national security, the Director, at the request of the National Security Council, shall advise the National Security Council in such matters concerning science, engineering, and technology as relate to national security.

(c) The Director, in order to fulfill his functions under this title, is authorized to—

(1) appoint, assign the duties, and fix the compensation of personnel without regard to the provisions of title 5, United States Code, governing appointments in the competitive service, and without regard to the provisions of chapter 51 and subchapter III of chapter 53 of such title, relating to classification and General Schedule pay rates, at rates not in excess of the rate prescribed for GS–18 of the General Schedule under section 5332 of such title; and

(2) enter into contracts and other arrangements for studies, analyses, and other services with public agencies

and with private persons, organizations, or institutions, and make such payments as he deems necessary to carry out the provisions of this Act without legal consideration, without performance bonds, and without regard to section 3709 of the Revised Statutes (41 U.S.C. 5).

COORDINATION WITH OTHER ORGANIZATIONS

SEC. 207. (a) In exercising his functions under this title, the Director shall—

(1) work in close consultation and cooperation with the Domestic Council, the National Security Council, the Council on Environmental Quality, the Council of Economic Advisers, the Office of Management and Budget, and the Federal departments and agencies;

(2) utilize the services of consultants, establish such advisory panels, and, to the extent practicable, consult with State and local governmental agencies, with appropriate professional groups, and with such representatives of industry, the universities, agriculture, labor, consumers, conservation organizations, and such other public interest groups, organizations, and individuals as he deems advisable;

(3) hold such hearings in various parts of the Nation as he deems necessary, to determine the views of the agencies, groups, and organizations referred to in paragraph (2) of this subsection and of the general public,

concerning national needs and trends in science, engineering, and technology; and

(4) utilize with their consent to the fullest extent possible the services, personnel, equipment, facilities, and information (including statistical informaton) of public and private agencies and organizations, and individuals, in order to avoid duplication of effort and expense, and may transfer funds made available pursuant to this act to other Federal agencies as reimbursement for the utilization of such personnel, services, facilities, equipment, and information.

(b) Each department, agency, and instrumentality of the Executive Branch of the Government, including any independent agency, is authorized to furnish the Director such information as the Director deems necessary to carry out his functions under this title.

(c) Upon request, the Administrator of the National Aeronautics and Space Administration is authorized to assist the Director with respect to carrying out his activities conducted under paragraph (5) of section 205 of this Act.

SCIENCE, ENGINEERING, AND TECHNOLOGY REPORT

SEC. 208. (a) The President shall transmit annually to the Congress, beginning February 15, 1977, a Science, Engineering, and Technology Report (hereinafter referred to as the "Report") which shall be prepared by the Office, with

appropriate assistance from the departments and agencies and such consultants and contractors as the Director deems necessary. The report shall include the estimates on Federal investment level and proposed priorities in science, engineering, and technology, prepared by the Director pursuant to section 204 of this Act, and to the extent practicable, within the limitations of available knowledge and resources, include such issues as—

(1) a review of developments of national significance in science, engineering, and technology;

(2) the significant effects of current and projected trends in science, engineering, and technology on the social, economic, and other requirements of the Nation;

(3) a review and appraisal of selected science-, engineering-, and technology-related programs, policies, and activities of the Federal Government;

(4) an inventory and forecast of critical and emerging national problems the resolution of which might be substantially assisted by the application of science, engineering, and technology;

(5) the identification and assessment of scientific, engineering, and technological measures that can contribute to the resolution of such problems, in light of the related social, economic, political, and institutional considerations;

(6) the existing and projected scientific, engineering, and technological resources, including specialized manpower, that could contribute to the resolution of such problems; and

(7) recommendations for legislation on science-, engineering-, and technology-related programs and policies that will contribute to the resolution of such problems.

(b) In preparing the Report under subsection (a) of this section, the Office shall make maximum use of relevant data available from the National Science Foundation and other government departments and agencies.

(c) The Director shall insure that the Report, in the form approved by the President, is printed and made available as a public document.

TITLE III—PRESIDENT'S ADVISORY COMMITTEE ON SCIENCE, ENGINEERING, AND TECHNOLOGY

ESTABLISHMENT

SEC. 301. The President is authorized to establish within the Executive Office of the President a President's Advisory Committee on Science, Engineering, and Technology (hereinafter referred to as the "Committee").

MEMBERSHIP

SEC. 302. (a) The Committee shall consist of—

(1) the Director of the Office of Science, Engineering, and Technology Policy established under title II of this Act; and

(2) not less than eight nor more than fourteen other members appointed by the President.

(b) Members of the Committee appointed by the President pursuant to subsection (a)(1) of this section shall—

(1) be exceptionally qualified and distinguished in science, engineering, technology, information dissemination, education, management, labor, or public affairs;

(2) be highly capable of critically assessing the policies, priorities, programs, and activities of the Nation, with respect to the findings, policies, and purposes set forth in title I; and

(3) shall collectively constitute a balanced composition with respect to (A) fields of science and engineering, (B) academic, industrial, and government experience, and (C) business, labor, consumer, and public interest points of view.

(c) The President shall appoint one member of the Committee to serve as Chairman and another member to serve as Vice Chairman for such periods as the President may determine.

(d) Each member of the Committee who is not an officer of the Federal Government shall, while serving on business of the Committee, be entitled to receive compensation at a

rate not to exceed the daily rate prescribed for GS–18 of the General Schedule under section 5332 of title 5, United States Code, including traveltime, and while so serving away from his home or regular place of business he may be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as the expenses authorized by section 5703(b) of title 5, United States Code, for persons in Government service employed intermittently.

FEDERAL SCIENCE, ENGINEERING, AND TECHNOLOGY SURVEY

SEC. 303. (a) The Committee shall survey, examine, and analyze the overall context of the Federal science, engineering, and technology effort including missions, goals, personnel, funding, organization, facilities, and activities in general, taking adequate account of the interests of individuals and groups that may be affected by Federal scientific, engineering, and technical programs, including, as appropriate, consultation with such individuals and groups. In carrying out its functions under this section, the Committee shall consider needs for—

(1) the establishment of such new departments, agencies, offices, or other organizations as may serve to strengthen the Nation's scientific, engineering, and technical capabilities and increase the effectiveness of their application to the solution of national problems;

(2) improvements in existing systems for handling scientific, engineering, and technical information on a Government-wide basis, including consideration of the appropriate role to be played by the private sector in the dissemination of such information;

(3) improved technology assessment in the executive branch of the Federal Government;

(4) improved methods for effecting technology innovation, transfer, and use;

(5) stimulating more effective Federal-State and Federal-industry liaison and cooperation in science, engineering, and technology;

(6) reduction and simplification of Federal regulations and administrative practices and procedures which may have the effect of retarding technological innovation or opportunities for its utilization;

(7) a broader base for support of basic research;

(8) ways of strengthening the Nation's academic institutions' capabilities for research and education in science, engineering, and technology;

(9) ways and means of effectively integrating scientific, engineering, and technological factors into our national and international policies;

(10) technology designed to meet community and individual needs;

(11) maintenance of adequate scientific, engineering, and technological manpower with regard to both quality and quantity;

(12) improved systems for planning and analysis of the Federal science, engineering, and technology programs; and

(13) long-range study, analysis, and planning in regard to the application of science, engineering, and technology to major national problems or concerns.

(b)(1) Within one year of the appointment of a majority of its members, the Committee shall submit a report to the President of its activities, findings, conclusions, and recommendations including such supporting data and material as may be necessary.

(2) After appropriate review of the report submitted under paragraph (1) of this subsection, the President shall transmit the report to the Congress, together with any recommendations he may wish to make concerning its findings.

CONTINUATION OF COMMITTEE

SEC. 304. (a) Ninety days after transmission of the report prepared under section 303, the Committee shall cease to exist, unless the President, before the expiration of the ninety-day period, makes a determination that it is advantageous for the Committee to continue in being.

(b) If the President determines that it is advantageous for the Committee to continue in being, (1) the Committee

shall continue in being and shall exercise such functions as are prescribed by the President; and (2) the members of the Committee shall serve at the pleasure of the President.

STAFF AND CONSULTANT SUPPORT

SEC. 306. (a) In the performance of its functions under sections 303 and 304, the Committee is authorized—

(1) to select, appoint, employ, and fix the compensation of such specialists and other experts as may be necessary for the carrying out of its functions under this Act, in accordance with section 3109 of title 5, United States Code (but without regard to the last sentence thereof);

(2) to appoint, assign the duties, and fix the compensation of personnel without regard to the provisions of title 5, United States Code, governing appointments in the competitive service, and without regard to the provisions of chapter 51 and subchapter III of chapter 53 of such title, relating to classification and General Schedule pay rates, at rates not in excess of the rate prescribed for GS–18 of the General Schedule under section 5332 of such title; and

(3) to provide for the participation of such civilian and military personnel as may be detailed to the Committee pursuant to subsection (b) of this section for carrying out the functions of the Committee.

(b) Upon request of the Committee, the head of any Federal department, agency, or instrumentality is authorized (1) to furnish to the Committee such information as may be necessary for carrying out its functions and as may be available to or procurable by such department, agency, or instrumentality, and (2) to detail to temporary duty with the Committee on a reimbursable basis such personnel within his administrative jurisdiction as it may need or believe to be useful for carrying out its functions. Each such detail shall be without loss of seniority, pay, or other employee status, to civilian employees so detailed, and without loss of status, rank, office, or grade, or of any emolument, perquisite, right, privilege or benefit incident thereto to military personnel so detailed. Each such detail shall be made pursuant to an agreement between the Chairman and the head of the relevant department, agency, or instrumentality, and shall be in accordance with the provisions of subchapter III of chapter 33, title 5, United States Code.

TITLE IV—FEDERAL COORDINATING GROUP FOR SCIENCE, ENGINEERING, AND TECHNOLOGY

ESTABLISHMENT AND FUNCTIONS

SEC. 401. (a) There is established the Federal Coordinating Group for Science, Engineering, and Technology (hereinafter referred to as the "Group").

(b) The Group shall be composed of the Director of the Office of Science, Engineering, and Technology Policy and one representative of each of the following Federal agencies: Department of Agriculture, Department of Commerce, Department of Defense, Department of Health, Education, and Welfare, Department of Housing and Urban Development, Department of the Interior, Department of State, Department of Transportation, Veterans' Administration, Nuclear Regulatory Commission, National Aeronautics and Space Administration, National Oceanic and Atmospheric Administration, National Science Foundation, Environmental Protection Agency, and Energy Research and Development Administration. Each such representative shall be an official of policy rank designated by the head of the Federal agency concerned.

(c) The Director of the Office of Science, Engineering, and Technology Policy shall serve as Chairman of the Group. The Chairman may make provision for another member of the Group to act temporarily in the Chairman's absence as Chairman of the Group.

(d) The Chairman may (1) request the head of any Federal agency not named in subsection (b) of this section to designate a representative to participate in meetings or parts of meetings of the Group concerned with matters of substantial interest to such agency, and (2) invite other persons to attend meetings of the Group.

(e) The Group shall consider problems and developments in the fields of science, engineering, and technology and related activities affecting more than one Federal agency, and shall recommend policies and other measures designed to—

(1) provide more effective planning and administration of Federal scientific, engineering, and technological programs,

(2) identify research needs including areas of research requiring additional emphasis,

(3) achieve more effective utilization of the scientific, engineering, and technological resources and facilities of Federal agencies, including the elimination of unnecessary duplication, and

(4) further international cooperation in science, engineering, and technology.

(f) The Group shall perform such other related advisory duties as shall be assigned by the President or by the Chairman.

(g) For the purpose of carrying out the provisions of this section, each Federal agency represented on the Group shall furnish necessary assistance to the Group. Such assistance may include—

(1) detailing employees to the Group to perform

such functions, consistent with the purposes of this section, as the Chairman may assign to them, and

(2) undertaking, upon request of the Chairman, such special studies for the Group as come within the functions herein assigned to the Group.

(h) For the purpose of conducting studies and making reports as directed by the Chairman, standing subcommittees and panels of the Group may be established.

ABOLITION OF FEDERAL COUNCIL FOR SCIENCE AND TECHNOLOGY

SEC. 402. The Federal Council for Science and Technology, established pursuant to Executive Order 10807, issued March 13, 1959, as amended by Executive Order 11381, issued November 8, 1967, is hereby abolished.

TITLE V—STATE AND REGIONAL SCIENCE AND TECHNOLOGY PROGRAM

ESTABLISHMENT OF INTERGOVERNMENTAL SCIENCE, ENGINEERING, AND TECHNOLOGY ADVISORY PANEL

SEC. 501. (a) There is established within the Office an Intergovernmental Science, Engineering, and Technology Advisory Panel (hereinafter referred to as the "Panel").

(b) The Panel shall be composed of members as follows:

(1) One member from each State, to be appointed by the Governor of that State.

(2) The Director of the National Science Foundation or his representative.

(3) The Director or his representative.

In making appointments under this subsection, the Governor of each State shall appoint individuals who are familiar with State and local needs, who would be effective in serving as a liasion between the State and the Federal Government, and, to the extent practicable, are familiar with science, engineering, and technology issues.

(c) Each appointed member of the Panel shall, while serving on business of the Panel, be entitled to receive compensation at a rate not to exceed the daily rate prescribed for GS–18 of the General Schedule under section 5332 of title V, United States Code, including traveltime, and while so serving away from his home or regular place of business, he may be allowed travel expenses, including per diem in lieu of subsistence in the same manner as the expenses authorized by section 5703(b) of title V, United States Code, for persons in Government service employed intermittently.

(d) The Director, or his representative, shall serve as Chairman of the Panel.

(e) The Panel shall perform such functions as the Chairman may prescribe, and shall meet at the call of the Chairman.

FUNCTIONS OF THE PANEL

SEC. 502. (a) The Panel shall advise and assist the Director in—

(1) identifying and defining civilian problems at the State, regional, and local levels to whose solution or amelioration the application of science, engineering, and technology may contribute;

(2) establishing priorities for addressing the problems identified in paragraph (1); and

(3) identifying and fostering ways to facilitate the transfer and utilization of results of Federal research and development activities so as to maximize their application to civilian needs.

GRANTS FOR STATE SCIENCE, ENGINEERING, AND TECHNOLOGY ADVISORY PROGRAMS

SEC. 503. (a) From funds authorized under section 602 of this title, the Director of the National Science Foundation, after consultation with the Panel, is authorized to make grants of not to exceed $200,000 to any State to pay a part of the costs of establishing or strengthening offices of State science, engineering, and technology within the executive and legislative branches of the State government.

(b) The purpose of any such office shall be to promote the

wise application of science, engineering, and technology to meeting the needs of the State and its political subdivisions, by providing assistance and advice to the Governor or the legislature of such State, as appropriate.

(c) No grant authorized under this section for the establishment or strengthening of an office of State science, engineering, and technology may exceed $100,000.

(d) No grant may be authorized under this section unless an application is submitted at such time, in such manner, and containing or accompanied by such information as the Director of the National Science Foundation shall require. Each such application shall contain provisions to assure that—

(1) the office for which assistance is sought under the application will (a) be headed by an official who, by reason of education and experience, is qualified to advise the Governor or legislature of a State, as appropriate, on the application of science, engineering, and technology to meeting the needs of the State and its political subdivisions, and (b) have sufficient authority, consistent with State law, to carry out any functions assigned to that office pursuant to this title; and

(2) it is the applicant's stated intention that the State will assume the costs of any office established or strengthened pursuant to this title not later than two years after the year in which the grant is made.

(c) The Director of the National Science Foundation shall approve any application which meets requirements of subsection (b) of this section, and shall not disapprove any application without affording an opportunity for a hearing.

(d)(1) The Director of the National Science Foundation shall pay to each State having an application approved under subsection (c) of this section the Federal share of the cost of that application.

(2) For each fiscal year the Federal share shall be 80 per centum.

(3) Any application submitted pursuant to this section shall not be funded unless such application is submitted to the Director of the National Science Foundation prior to thirty-six months after the date of enactment of this Act.

TITLE VI—GENERAL PROVISIONS

DEFINITIONS

SEC. 601. As used in this Act:

(1) The term "Office" means the Office of Science, Engineering, and Technology Policy.

(2) The term "Committee" means the President's Advisory Committee on Science, Engineering, and Technology.

(3) The term "Group" means the Federal Coordinating Group for Science, Engineering, and Technology.

(4) The term "Panel" means the Intergovernmental Science, Engineering, and Technology Advisory Panel.

(5) The term "Foundation" means the National Science Foundation.

(6) The term "State" means each of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Trust Territory of the Pacific Islands.

(7) The term "standard Federal region" means each of the following regions:

(A) Region I: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

(B) Region II: the Commonwealth of Puerto Rico, New Jersey, New York, and the Virgin Islands.

(C) Region III: Delaware, the District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia.

(D) Region IV: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

(E) Region V: Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin.

(F) Region VI: Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

(G) Region VII: Iowa, Kansas, Missouri, and Nebraska.

(H) Region VIII: Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming.

(I) Region IX: Arizona, California, Hawaii, and Nevada.

(J) Region X: Alaska, Idaho, Oregon, and Washington.

AUTHORIZATION OF APPROPRIATIONS

SEC. 602. (a) There are authorized to be appropriated $4,000,000 for the fiscal year 1976, of which $1,000,000 shall be available to carry out the provisions of title II, $1,000,000 shall be available to carry out the provisions of title III, and $2,000,000 shall be available to carry out the provisions of title V; $1,500,000 for the period beginning July 1, 1976, and ending September 30, 1976, of which $250,000 shall be available to carry out the provisions of title II, $250,000 shall be available to carry out the provisions of title III, and $1,000,000 shall be available to carry out the provisions of title V; and $12,000,000 for the fiscal year 1977, of which $3,000,000 shall be available to carry out the provisions of title II, $1,000,000 shall be available to carry out the provisions of title III, and $8,000,000 shall be available to carry out the provisions of title V.

(b) Funds appropriated pursuant to subsection (a) of

this section shall remain available for obligation, for expenditure, or for obligation and expenditure, for such period or periods as may be specified in Acts making such appropriations.

REPEALER

SEC. 603. Sections 1, 2, 3, and 4 of Reorganization Plan Numbered 2 of 1962 (76 Stat. 1253) and section 2 of Reorganization Plan Numbered 1 of 1973 (87 Stat. 1089) are repealed.

[JOINT COMMITTEE PRINT NO. 6]

JANUARY 19, 1976

(Proposed amendment for the consideration of the Committees)

Calendar No.

94TH CONGRESS
1ST SESSION

S. 32

[Report No. 94–]

A BILL

To establish a framework for the formulation of national policy and priorities for science and technology, and for other purposes.

By Mr. KENNEDY, Mr. MOSS, Mr. TUNNEY, Mr. BENTSEN, Mr. BROOKE, Mr. CANNON, Mr. CASE, Mr. CHURCH, Mr. CRANSTON, Mr. CULVER, Mr. GRAVEL, Mr. PHILIP A. HART, Mr. HATFIELD, Mr. HUMPHREY, Mr. INOUYE, Mr. JAVITS, Mr. JOHNSTON, Mr. LEAHY, Mr. MCGEE, Mr. MCGOVERN, Mr. MAGNUSON, Mr. MANSFIELD, Mr. METCALF, Mr. MONDALE, Mr. MONTOYA, Mr. MUSKIE, Mr. PELL, Mr. RANDOLPH, Mr. SPARKMAN, Mr. STAFFORD, Mr. WEICKER, and Mr. WILLIAMS

JANUARY 15, 1975

Read twice and, by unanimous consent, referred to the Committees on Labor and Public Welfare, Commerce, and Aeronautical and Space Sciences

JANUARY , 1976

Reported with an amendment

Calendar No. 596

94TH CONGRESS
2D SESSION

S. 32

[Report No. 94–622]

IN THE SENATE OF THE UNITED STATES

JANUARY 15, 1975

Mr. KENNEDY (for himself, Mr. MOSS, Mr. TUNNEY, Mr. BENTSEN, Mr. BROOKE, Mr. CANNON, Mr. CASE, Mr. CHURCH, Mr. CRANSTON, Mr. CULVER, Mr. GRAVEL, Mr. PHILIP A. HART, Mr. HATFIELD, Mr. HATHAWAY, Mr. HUMPHREY, Mr. INOUYE, Mr. JAVITS, Mr. JOHNSTON, Mr. LEAHY, Mr. MCGEE, Mr. MCGOVERN, Mr. MAGNUSON, Mr. MANSFIELD, Mr. METCALF, Mr. MONDALE, Mr. MONTOYA, Mr. MUSKIE, Mr. PELL, Mr. RANDOLPH, Mr. SPARKMAN, Mr. STAFFORD, Mr. WEICKER, and Mr. WILLIAMS) introduced the following bill; which was read twice and, by unanimous consent, referred to the Committees on Labor and Public Welfare, Commerce, and Aeronautical and Space Sciences

FEBRUARY 3, 1976

Reported by Mr. KENNEDY, with an amendment

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

A BILL

To establish a framework for the formulation of national policy and priorities for science and technology, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, ~~That this Act may be cited as the "National Policy and Priorities for Science and Technology Act of 1975".~~

GERALD R. FORD LIBRARY

STATEMENT OF FINDINGS AND DECLARATION OF POLICY

SEC. 2. (2) The Congress, recognizing the profound impact of science and technology on society, and the interrelations of scientific, technological, economic, social, political, and institutional factors, hereby finds that—

(1) Federal funding for science and technology represents an investment in the future, which is indispensable to sustained national progress;

(2) the manpower pool of scientists and engineers constitutes an invaluable national resource which should be utilized to the maximum extent possible at all times;

(3) the scientific and technological capabilities within the United States, if properly applied and directed, could effectively assist in improving the quality of life and in anticipating and resolving many critical and emerging national problems;

(4) strong participation by State and local governments is essential to the successful solution of many civilian problems, and in developing programs for the application of science and technology to civilian needs and to setting civilian research and development activities priorities;

(5) the maintenance and strengthening of diversified scientific and technological capabilities in government, industry and the universities, and the encouragement of independent initiatives based on such capabilities,

are essential to the most effective use of science and technology in resolving critical and emerging national problems;

(6) a more systematic approach is needed to identify critical and emerging national problems and to analyze, plan, and coordinate Federal science and technology programs, policies, and activities intended to contribute to the resolution of such problems; and

(7) the effectiveness of scientific and technological contributions to improvements in the quality of life and the resolution of critical and emerging national problems depends on the maintenance of a strong base of knowledge in science and advanced technology together with a resource of highly qualified scientists and engineers.

(b) The Congress declares that it is the continuing policy and responsibility of the Federal Government to take appropriate measures directed toward achieving the following goals—

(1) there must be a continuing Federal investment in science and technology adequate to the needs of the Nation;

(2) the level of this investment must be adjusted annually with regard to particular needs and opportunities and the prevalent economic situation;

(3) the Federal investment in science and technology must be allocated annually among the priority needs of the Nation, including the need to maintain the Nation's strength in basic research and education in science and engineering;

(4) scientists, engineers, and technicians must have continuing opportunities for socially useful employment in positions commensurate with their professional, technical capabilities; and

(5) the National capabilities for technological planning and policy formulation must be strengthened.

(c) Therefore, it is declared to be the purpose of this Act to promote the effective application of science and technology to the furtherance of national goals by—

(1) establishing a Council of Advisers on Science and Technology in the Executive Office of the President to provide a source of scientific and technological analysis and judgment to the President;

(2) establishing an Intergovernmental Science and Technology Advisory Committee to foster the application of science and technology to State and regional needs;

(3) establishing an Interagency Federal Coordinating Committee on Science and Technology to coordinate agency research and development efforts; and

(4) having the President submit an annual Science and Technology Report to the Congress.

TITLE I—COUNCIL OF ADVISERS ON SCIENCE AND TECHNOLOGY

ESTABLISHMENT OF COUNCIL

SEC. 101. (a) There is established in the Executive Office of the President a Council of Advisers on Science and Technology (hereinafter referred to as the "Council"). The Council shall be composed of three members who shall be appointed by the President, by and with the advice and consent of the Senate from among individuals who, by reason of their training, experience, and attainments, are exceptionally qualified to analyze and interpret scientific and technological development; to appraise and recommend programs, policies, and activities of the Federal Government in the light of the policy declared in section 2; and are sensitive to the economic, social, esthetic, and cultural needs and interests of the Nation.

(b) The President shall designate one of the members of the Council as Chairman and one as Vice Chairman, who shall act as Chairman in the absence of the Chairman.

(c) Members of the Council shall serve full time and the Chairman of the Council shall be compensated at the rate provided for level II of the Executive Schedule (5 U.S.C. 5313). The other members of the Council shall be

compensated at the rate provided for level IV of the Executive Schedule (5 U.S.C. 5315).

(d) The Council may employ such officers and employees as may be necessary to carry out its functions under this Act. In addition, the Council may employ and fix the compensation of such experts and consultants as may be necessary for the carrying out of its functions under this Act, in accordance with section 3109 of title 5, United States Code (but without regard to the last sentence thereof).

(e) The Council shall have the authority, within the limits of available appropriations, to enter into contracts or other arrangements for the carrying out by organizations or individuals, including other Government agencies, of such activities as the Council deems necessary to carry out the purposes of this Act.

FEDERAL INVESTMENT IN SCIENCE AND TECHNOLOGY

SEC. 102. (a) The Council shall annually appraise progress in science and technology in relation to the needs of the Nation and, taking account of the state of the economy through consultation with the Council of Economic Advisers, shall determine the desired level of Federal investment in science and technology for the fiscal year immediately following the fiscal year in which such determination is made.

(b) On the basis of such determination, the Council shall make appropriate recommendations to the President and the

Congress regarding the desired level of Federal investment in science and technology for the fiscal year immediately following the fiscal year in which such recommendations are made.

SCIENCE AND TECHNOLOGY PRIORITIES

SEC. 103. (a) The Council shall annually assess alternative uses of Federal funds for science and technology in relation to scientific and technical opportunities and national needs, and on the basis thereof shall determine a set of priorities for allocating Federal funds among major expenditure areas in science and technology, which pertain to the fiscal year immediately following the fiscal year in which such determination is made.

(b) On the basis of such determination, the Council shall make appropriate recommendations to the President and the Congress regarding such priorities.

SCIENCE AND TECHNOLOGY POLICY ANALYSIS AND PLANNING

SEC. 104. (a) The Council shall serve as a source of scientific and technological analysis and judgment for the President with respect to major policies, plans, and programs of science and technology of the Federal Government. In carrying out this function, the Council shall—

(1) seek to define a coherent approach for applying science and technology to critical and emerging national problems and for coordinating the scientific and techno-

logical responsibilities and programs of the Federal departments and agencies in the resolution of such problems;

(2) assist and advise the President in the preparation of the Science and Technology Report, in accordance with section 108 of this title;

(3) gather timely and authoritative information concerning significant developments and trends in science, technology, and in national priorities, both current and prospective, to analyze and interpret such information for the purpose of determining whether such developments and trends are interfering, or are likely to interfere, with the achievement of the policy set forth in section 2 of this Act;

(4) initiate studies and analyses, including systems analyses and technology assessments of alternatives available for the resolution of critical and emerging national problems amenable to the contributions of science and technology and, insofar as possible, determine and compare probable costs, benefits, and impacts of these alternatives;

(5) review and appraise the various programs, policies, and activities of the Federal Government in the light of the policy set forth in section 2 of this Act for the purpose of determining the extent to which such pro-

grams, policies, and activities are contributing to the achievement of such policy, and to make recommendations to the President with respect thereto;

(6) report at least once each year to the President on the overall activities and accomplishments of the Council, pursuant to section 108 of this title; and

(7) perform other duties and functions and make and furnish such studies, reports thereon, and recommendations with respect to matters of policy and legislation as the President may request.

FUNCTIONS OF THE CHAIRMAN

SEC. 105. The Chairman of the Council shall, in addition to the other duties and functions set forth in this title—

(1) serve as the Science and Technology Adviser to the President;

(2) serve as Chairman of the Federal Coordinating Committee for Science and Technology established under title II of this Act;

(3) appoint, assign the duties, and fix the compensation of personnel without regard to the provisions of title 5, United States Code, governing appointments in the competitive service, and without regard to the provisions of chapter 51 and subchapter III of chapter 53 of such title, relating to classification and General Sched-

ule pay rates, at rates not in excess of the rate prescribed for GS–18 of the General Schedule under section 5332 of such title; and

(4) perform such other duties and functions as the President may request.

COORDINATION WITH OTHER ORGANIZATIONS

SEC. 106. (a) In exercising its powers, functions, and duties under this title, the Council shall—

(1) work in close consultation and cooperation with the heads of the Federal departments and agencies;

(2) utilize the services of consultants, establish such advisory committees, and, to the extent practicable, consult with State and local governmental agencies, with appropriate professional groups, and with such representatives of industry, the universities, agriculture, labor, consumers, conservation organizations, and other groups, organizations and individuals as it may deem advisable;

(3) hold such hearings in various parts of the Nation as the Council deems necessary, to determine the views of such agencies, groups, and organizations referred to in paragraph (2) of this subsection and of the general public, concerning trends in science and technology; and

(4) utilize to the fullest extent possible the existing services, facilities, and information (including statistical

information) of public and private agencies and organizations, and individuals, in order that duplication of effort and expense may be avoided.

(b) Each department, agency, and instrumentality of the executive branch of the Government, including any independent agency, is authorized to furnish the Council such information as the Council deems necessary to carry out its function under this title.

(c) Upon request, the Administrator of the National Aeronautics and Space Administration is authorized to assist the Council with respect to carrying out its activities conducted under paragraph (4) of subsection 104(a) of this title.

STUDY OF FEDERAL ORGANIZATION FOR SCIENCE AND TECHNOLOGY

SEC. 107. (a) Not later than ninety days following appointment of the Council members, the Council shall contract with the National Academy of Sciences to conduct a study in order to recommend improvements in the Federal organization for civilian science and technology.

(b) Such contract shall contain provisions to assure that the study takes adequate account of the impact of Federal scientific and technical programs on—

(1) the generation of scientific and technical knowledge;

(2) the utilization of such knowledge in dealing with economic and social problems and opportunities;

(3) the utilization and enhancement of the Nation's scientific and technical manpower and resources;

(4) the strength of the economy, both domestically and internationally;

(5) the quality of the environment; and

(6) the interests of individuals and groups that may be affected by Federal scientific and technical programs.

(c) The study shall include, without being limited to—

(1) examination and appraisal of the existing Federal organization for civilian science and technology;

(2) consideration of possible improvements in such organization; and

(3) consideration of the establishment of such new departments, agencies, offices, or other organizations as may serve to strengthen the Nation's scientific and technical enterprise and increase the effectiveness of its application to the solution of national problems.

(d) In conducting its study, the Academy shall make maximum feasible use of related investigations and studies conducted by public and private agencies, including congressional hearings and reports.

(e) The Academy shall transmit to the Council not later than eighteen months after the starting date of the contract,

a final report, containing detailed statements of the findings and conclusions of the Academy, together with its recommendations for improvements in the Federal organization for civilian science and technology.

SCIENCE AND TECHNOLOGY REPORT

SEC. 108. (a) The President shall transmit annually to the Congress, beginning October 15, 1976, a Science and Technology Report (hereinafter referred to as the "Report") which shall set forth—

(1) a review of developments of national significance in science and technology, including, but not limited to, the mathematical, physical, social, and life sciences, and civil, chemical, electrical, and mechanical engineering, and other technologies;

(2) the significant effects of current and foreseeable trends in science and technology on the social, economic, and other requirements of the Nation;

(3) a review and appraisal of selected science and technology related programs, policies, and activities of the Federal Government;

(4) an inventory and projection of critical and emerging national problems the resolution of which might be substantially assisted by the application of science and technology;

(5) the identification and assessment of scientific and technological measures that can contribute to the resolution of such problems, in light of the related social, economic, political, and institutional considerations;

(6) the existing and projected scientific and technological resources, including specialized manpower, that could contribute to the resolution of such problems;

(7) recommendations for legislation on science and technology-related programs and policies that will contribute to the resolution of such problems.

(8) recommendations with regard to Federal investment level and priorities in science and technology, as made by the Council pursuant to sections 102 and 103 of this title.

(b) The Council shall insure that the report is printed and made available as a public document.

(c) If the recommendations in the report regarding Federal investment level and priorities in science and technology are substantially different from those submitted by the Council to the President, then the report shall include an appendix containing the original recommendations of the Council to the President, along with the Council's supporting justification and the reasons why the President did not accept the recommendations as submitted.

TITLE II—FEDERAL COORDINATING COMMITTEE FOR SCIENCE AND TECHNOLOGY

ESTABLISHMENT AND FUNCTIONS OF FEDERAL COORDINATING COMMITTEE FOR SCIENCE AND TECHNOLOGY

SEC. 201. (a) There is established the Federal Coordinating Committee for Science and Technology (hereinafter referred to as the "Committee").

(b) The Committee shall be composed of the Chairman of the Council of Advisers on Science and Technology and one representative of each of the following: Department of Agriculture, Department of Commerce, Department of Defense, Department of Health, Education, and Welfare, Department of Housing and Urban Development, Department of the Interior, Department of State, Department of Transportation, Veterans Administration, Atomic Energy Commission, National Aeronautics and Space Administration, National Science Foundation, Environmental Protection Agency, and Energy Research and Development Agency. Each such representative shall be an official of policy rank designated by the head of the Federal agency concerned.

(c) The Chairman of the Council of Advisers on Science and Technology shall serve as Chairman of the Committee. The Chairman may make provision for another

member of the Council to act temporarily as Chairman of the Committee.

(d) The Chairman (1) may request the head of any Federal agency not named in subsection (b) of this section to designate a representative to participate in meetings or parts of meetings of the Committee concerned with matters of substantial interest to such agency, and (2) may invite other persons to attend meetings of the Committee.

(e) The Committee shall consider problems and developments in the fields of science and technology and related activities affecting more than one Federal agency, and shall recommend policies and other measures—

(1) to provide more effective planning and administration of Federal scientific and technological programs,

(2) to identify research needs including areas of research requiring additional emphasis,

(3) to achieve more effective utilization of the scientific and technological resources and facilities of Federal agencies, including the elimination of unnecessary duplication, and

(4) to further international cooperation in science and technology.

(f) The Committee shall perform such other related

duties as shall be assigned, consonant with law, by the President or by the Chairman.

(g) For the purpose of effectuating this section, each Federal agency represented on the Committee shall furnish necessary assistance to the Committee in accordance with section 214 of the Act of May 3, 1945 (59 Stat. 134; 31 U.S.C. 691). Such assistance may include—

(1) detailing employees to the Committee to perform such functions, consistent with the purposes of this section, as the Chairman may assign to them, and

(2) undertaking, upon request of the Chairman, such special studies for the Committee as come within the functions herein assigned to the Committee.

(h) For the purpose of conducting studies and making reports as directed by the Chairman, standing subcommittees and panels of the Committee may be established in consonance with the provisions of section 214 of the Act of May 3, 1945 (59 Stat. 134; 31 U.S.C. 691).

ABOLITION OF FEDERAL COUNCIL FOR SCIENCE AND TECHNOLOGY

SEC. 202. The Federal Council for Science and Technology established pursuant to Executive Order 10807, dated

GERALD R. FORD LIBRARY

March 13, 1959, as amended by Executive Order 11381, dated November 8, 1967, is hereby abolished.

TITLE III—NATIONAL SCIENCE FOUNDATION

NATIONAL SCIENCE POLICY

SEC. 301. Section 3 (d) of the National Science Foundation Act of 1950 is amended to read as follows:

"(d) The foundation shall recommend and encourage the pursuit of national policies designed to foster research and education in science and engineering, and the application of scientific and technical knowledge to the solution of national problems."

NATIONAL SCIENCE BOARD

SEC. 302. Section 4 of the National Science Foundation Act of 1950 is amended—

(1) by inserting before the period at the end of subsection (a) a comma and the following: "within the framework of applicable national policies as set forth by the President and the Congress" and

(2) by striking out subsection (c) and inserting in lieu thereof the following:

"(c) The persons nominated for appointment as members of the Board (1) shall be eminent in the fields of science, social science, engineering, agriculture, industry, education, or public affairs, (2) shall be selected solely on the basis of established records of distinguished service, and (3) shall be

so selected as to provide representation of the views of leaders from a diversity of fields from all areas of the Nation. The President is requested, in the making of nominations of persons for appointment as members, to give due consideration to any recommendations for nomination which may be submitted to him by the National Academy of Sciences, the National Academy of Engineering, the National Association of State Universities and Land-Grant Colleges, the Sea Grant Association, the Association of American Universities, the Association of American Colleges, the Association of State Colleges and Universities, or by other scientific, technical, public interest or educational associations."

ASSISTANCE TO COUNCIL

SEC. 303. In order to carry out the purposes of this Act, the National Science Foundation is authorized to—

(1) gather and analyze information regarding Federal expenditures for research and engineering activities, and the employment and availability of scientific, engineering, and technical manpower, which the Foundation has assembled pursuant to paragraphs (1), (5), (6), and (7) of section 3 (a) of the National Science Foundation Act of 1950 in order to appraise the implementation of the policies set forth in section 2 of this Act;

(2) provide such information and appraisals to the Council of Advisers on Science and Technology; and

(3) provide such additional information and staff assistance to the Council of Advisors on Science and Technology as the Council may request.

CONTINUING EDUCATION IN SCIENCE AND ENGINEERING

SEC. 304. (a) Not later than ninety days following enactment of this Act, the National Science Foundation shall initiate an educational program of continuing education in science and engineering in order to enable scientists and engineers who have been engaged in their careers for at least five years to pursue courses of study designed to—

(1) provide them with new knowledge, techniques, and skills in their special fields; or

(2) acquire new knowledge, techniques, and skills in other fields which will enable them to render more valuable contributions to the Nation.

(b) The program developed under this section shall include, but not be limited to—

(1) the development of special curriculums and education techniques for continuing education in science and technology; and

(2) the award of fellowships to scientists and engineers to enable them to pursue courses of study which provide continuing education in science and engineering.

(c) From funds available pursuant to section 502, the

Foundation is authorized to make grants to, and to enter into contracts with, institutions of higher education and other academic institutions, nonprofit institutes and organizations, and private business firms, for the purpose of developing courses and curriculums specially designed for continuing education in science and technology under this section.

(d) (1) From funds available pursuant to section 502 the Foundation is authorized to award continuing education fellowships to scientists and engineers to enable them to pursue appropriate courses of study.

(2) The Foundation shall allocate fellowships under this subsection in such manner, insofar as practicable, as will—

(A) attract highly qualified applicants; and

(B) provide an equitable distribution of such fellowships throughout the United States.

(3) The Foundation shall pay to persons awarded fellowships under this section such stipends (including such allowances for subsistence, health insurance, relocation expenses, and other expenses for such persons and their dependents) as it may prescribe by regulation designed to accomplish the purposes of this Act.

(4) Fellowships shall be awarded under this section upon application made at such times and containing such information as the Foundation shall by regulation require,

TITLE IV—STATE AND REGIONAL SCIENCE AND TECHNOLOGY PROGRAMS

ESTABLISHMENT OF INTERGOVERNMENTAL SCIENCE AND TECHNOLOGY ADVISORY PROGRAMS

SEC. 401. (a) There is established in the National Science Foundation an Intergovernmental Science and Technology Advisory Committee.

(b) The Committee shall be composed of twenty-two members to be appointed as follows:

(1) Twenty members, two from each of the standard Federal regions, shall be appointed by the President, by and with the advice and consent of the Senate;

(2) A member of the Council selected by the Chairman of the Council; and

(3) The Director of the Foundation.

In making appointments under clause (1) of this subsection, the President is requested to consider the appointment of individuals, who, by reason of education, experience, or interest, are especially qualified to serve on the Committee and to give due consideration to nominations received from the Council of State Governments, National Governors' Conference, National Conference of State Legislatures, International City Management Association, National League of Cities/United States Conference of Mayors, National Association of County Officials, and other public interest organizations.

(c) The term of office of each member of the Committee appointed under clause (1) of subsection (b) shall be three years; except that—

(1) the members first taking office shall serve as designated by the President, six for a term of one year, eight for a term of two years, and six for a term of three years; and

(2) any member appointed to fill a vacancy occurring prior to the expiration of the term to which his predecessor was appointed shall be appointed for the remainder of such term.

(3) Each appointed member of the Committee shall, while serving on business of the Committee, be entitled to receive compensation at a rate not to exceed the daily rate prescribed for GS-18 of the General Schedule under section 5332 of title 5, United States Code, including traveltime, and while so serving away from his home or regular place of business he may be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as the expenses authorized by section 5703(b) of title 5, United States Code, for persons in Government service employed intermittently.

FUNCTIONS OF THE COMMITTEE

SEC. 402. (a) The Committee shall advise and assist the Foundation in—

(1) identifying and defining civilian problems at the State, regional, and local levels and the environment in which solutions to these problems ought to be provided;

(2) identifying areas of highest priority for study, assessment, and development of policy alternatives by the Foundation under this title; and

(3) identifying and fostering ways to facilitate the transfer and utilization of results of civilian research and development activities so as to maximize the application of science and technology to civilian needs.

(b) The Committee is authorized to—

(1) assist the Director of the Foundation, as appropriate, in taking account of State and regional needs and opportunities in the formulation of the Foundation's plans and programs;

(2) assist the States, including the furnishing of technical assistance, in establishing State science advisory programs pursuant to section 404;

(3) develop and furnish to the States, at their request, advisory guidelines for the formulation of civilian

research and development priorities within each State and within each standard Federal region;

(4) review and evaluate the effectiveness of programs and activities assisted under this title; and

(5) prepare and furnish to the Director of the Foundation for incorporation into the annual report of the Foundation to the Congress, a report of the activities of the Committee under this title, together with such recommendations, including recommendations for additional legislation, as the Committee deems appropriate.

(c) (1) The Committee shall annually elect a Chairman from among its regional members.

(2) The Committee shall meet at the call of the Chairman, but not less than four times a year.

(3) The Foundation shall make available to the Committee such information and assistance as may be required to carry out its functions under this section.

ADMINISTRATIVE PROVISIONS

SEC. 403. (a) Subject to such rules and regulations as may be adopted by the Committee, the Chairman shall have the power to—

(1) appoint and fix the compensation of an executive director, and such additional staff personnel as he deems necessary, without regard to the provisions of title 5, United States Code, governing appointments in the com-

petitive service, and without regard to the provisions of chapter 51 and subchapter III of chapter 53 of such title relating to classification and General Schedule pay rates, but at rates not in excess of the maximum rate for GS–18 of the General Schedule under section 5332 of such title, and

(2) procure temporary and intermittent services to the same extent as is authorized by section 3109 of title 5, United States Code.

(b) Each department, agency, and instrumentality of the executive branch of the Government, including independent agencies, is authorized and directed to furnish to the Committee, upon request made by the Chairman or Vice Chairman, such information as the Committee deems necessary to carry out its functions under this title.

GRANTS FOR STATE SCIENCE AND TECHNOLOGY PROGRAMS

SEC. 404. (a) The Director of the National Science Foundation, after consultation with the Intergovernmental Science and Technology Advisory Committee, is authorized to make grants of not to exceed $100,000 to any State to pay a part of the cost of establishing an Office of State Science and Technology.

(b) No grant may be made under this section unless an application is submitted at such time in such manner and containing or accompanied by such information as the

Director after consultation with the Committee requires. Each such application shall contain provisions to assure that—

(1) the office for which assistance is sought under the application will (A) be headed by an official who by reason of education and experience is qualified to advise the chief executive of the State and other State and local public officials on the application of science and technology to civilian needs relating to that State or locality and (B) have sufficient authority consistent with State law to carry out any functions assigned to that office pursuant to this title; and

(2) the State will assume the cost of the office established pursuant to this title no later than two years after the year in which the application is made.

(c) The Director shall approve any application which meets the requirements of subsection (b), and shall not disapprove any application without affording an opportunity for a hearing.

TITLE V—GENERAL PROVISIONS

DEFINITIONS

SEC. 501. As used in this Act:

(1) The term "Council" means the Council of Advisers on Science and Technology.

~~(2) The term "Foundation" means the National Science Foundation.~~

~~(3) The term "State" means each of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Trust Territory of the Pacific Islands.~~

~~(4) The term "standard Federal region" means each of the following regions:~~

~~(A) Region I: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.~~

~~(B) Region II: the Commonwealth of Puerto Rico, New Jersey, New York, and the Virgin Islands.~~

~~(C) Region III: Delaware, the District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia.~~

~~(D) Region IV: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.~~

~~(E) Region V: Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin.~~

~~(F) Region VI: Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.~~

~~(G) Region VII: Iowa, Kansas, Missouri, and Nebraska.~~

~~(H) Region VIII: Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming.~~

~~(I) Region IX: Arizona, California, Hawaii, and Nevada.~~

~~(J) Region X: Alaska, Idaho, Oregon, and Washington.~~

~~AUTHORIZATION OF APPROPRIATIONS~~

~~SEC. 502. (a) There are authorized to be appropriated $8,000,000 for the fiscal year ending June 30, 1976, of which $1,500,000 shall be available to carry out the provisions of section 107 of title I, $2,500,000 shall be available to carry out the other provisions of title I, $1,500,000 shall be available to carry out the provisions of title III, and $2,500,000 shall be available to carry out the provisions of title IV; and~~ $14,000,000 ~~for the fiscal year~~ ending ~~June 30, 1977, of which $5,000,000~~ shall be ~~available to carry out the provisions of title I, $3,500,000 shall~~ be ~~available to carry out the provisions~~ of title ~~III, and $5,500,000 shall be available to carry out the provisions~~ of title IV.

~~(b) Funds appropriated pursuant to subsection~~ (a) of ~~this section shall remain available for obligation, for expenditure, or for obligation and expenditure, for such period or periods as may be specified in Acts making such appropriations.~~

That this Act may be cited as the "National Policy, Organization, and Priorities for Science, Engineering, and Technology Act of 1976".

TITLE I—NATIONAL SCIENCE, ENGINEERING, AND TECHNOLOGY POLICY AND PRIORITIES

FINDINGS

SEC. 101. The Congress, recognizing the profound impact of science, engineering, and technology on society, and the interrelations of scientific, engineering, technological, economic, social, political, international, and institutional factors, hereby finds that—

(1) Federal funding for science, engineering, and technology represents an investment in the future which is indispensable to sustained national progress and human betterment;

(2) the manpower pool of scientists, engineers, and technicians constitutes an invaluable national resource which should be utilized to the fullest extent possible;

(3) the scientific, engineering, and technological capabilities within the United States, when properly fostered, applied, and directed, can effectively assist in improving the quality of life, in anticipating and resolving many critical and emerging international, national, and local problems, in strengthening America's

international economic competitive position, and in furthering the Nation's foreign policy objectives;

(4) strong participation by State and local governments is essential to the successful solution of many civilian problems, and in developing programs for the application of science, engineering, and technology to civilian needs and to setting priorities for civilian research and development activities;

(5) the widespread influence of technology in society requires sound planning and management to meet human needs;

(6) the maintenance and strengthening of diversified scientific, engineering, and technological capabilities in government, industry, and the universities, and the encouragement of independent initiatives based on such capabilities, are essential to the most effective use of science, engineering, and technology in resolving critical and emerging national problems;

(7) a systematic approach is needed to identify and anticipate critical and emerging national problems and to analyze, plan, and coordinate Federal science, engineering, and technology programs, policies, and activities intended to contribute to the resolution of such problems, including long-range, inclusive planning as well as intermediate and short-range program development; and

(8) the effectiveness of scientific, engineering, and technological contributions to the achievement of national goals depends on the maintenance of a strong base of knowledge in science, engineering, and advanced technology together with a resource of highly qualified scientists and engineers.

DECLARATION OF POLICIES AND PRIORITIES

SEC. 102. The Congress declares that it is the continuing policy and responsibility of the Federal Government to take appropriate measures to achieve the following goals:

(1) There must be a continuing national investment in science, engineering, and technology adequate to the needs of the Nation.

(2) The level of this investment must be commensurate with national needs and opportunities and the prevalent economic situation.

(3) The Federal Government must promote the effective and efficient utilization in the national interest of the Nation's human resources in science, engineering, and technology.

(4) The Nation's capabilities for technology assessment and for technological planning and policy formulation must be strengthened at both Federal and State levels.

(5) The Federal investment in science, engineering,

and technology must be used to help meet the priority needs of the Nation, including but not limited to—

(A) maintaining the Nation's strength in basic and applied research and education in science and engineering;

(B) assuring widespread dissemination of scientific, engineering, and technical knowledge;

(C) utilizing science, engineering, and technology in support of the Nation's domestic and foreign policy goals;

(D) promoting the conservation and efficient utilization of the Nation's natural and human resources;

(E) providing for the protection of the oceans and the coastal zones, and the efficient utilization of their resources;

(F) strengthening the economy and promoting full employment through useful technological innovations;

(G) assuring an adequate supply of food, materials, and energy for the Nation's needs;

(H) strengthening the national security;

(I) improving the quality of health care available to all United States citizens;

(J) improving the Nation's transportation and communication services;

(K) increasing the quality of educational opportunities available to all United States citizens;

(L) assuring the provision of effective public services throughout urban, suburban, and rural areas in fields such as public safety, firefighting, and sanitation;

(M) developing high-quality, low-cost housing systems;

(N) eliminating air and water pollution and unnecessary, unhealthful, or ineffective drugs and food additives; and

(O) enhancing the quality of the environment.

DECLARATION OF PURPOSE

SEC. 103. It is declared to be the purpose of this Act to promote the effective application of science, engineering, and technology to the furtherance of national goals by—

(1) establishing, in the Executive Office of the President, an Office of Science, Engineering, and Technology Policy to provide a continuing source of science, engineering, and technology policy analysis and judgment to the President;

(2) establishing a State and Regional Science, Engineering, and Technology Program to foster the application of science, engineering, and technology to State and regional needs;

(3) establishing an Interagency Federal Coordinating Group on Science, Engineering, and Technology to coordinate agency research and development efforts; and

(4) having the President submit an annual Science, Engineering, and Technology Report to the Congress.

TITLE II—OFFICE OF SCIENCE, ENGINEERING, AND TECHNOLOGY POLICY

ESTABLISHMENT

SEC. 201. There is established in the Executive Office of the President an Office of Science, Engineering, and Technology Policy (hereinafter referred to as the "Office").

DIRECTOR

SEC. 202. (a) The Office shall be administered by a Director who shall be appointed by the President, by and with the advice and consent of the Senate, and who shall be compensated at the rate provided for level II of the Executive Schedule in section 5313 of title 5, United States Code.

(b) The President shall choose a Director from among individuals who (1) by reason of their training, experience, and attainments, are exceptionally qualified to analyze and interpret the implications of scientific, engineering, and tech-

nological development and to appraise and recommend programs, policies, and activities of the Federal Government in the light of the policies and priorities set forth in section 102 of this Act; and (2) are sensitive to the economic, social, esthetic, and cultural needs and interests of the Nation.

ASSOCIATE DIRECTORS

SEC. 203. (a) The President is authorized to appoint not to exceed four Associate Directors, by and with the advice and consent of the Senate, and who shall be compensated at a rate not to exceed level III of the Executive Schedule in section 5314 of title 5, United States Code.

(b) Any Associate Director appointed by the President shall be chosen from among individuals who (1) by reason of their training, experience, and attainments, are exceptionally qualified to analyze and interpret the implications of scientific, engineering, and technological development and to appraise and recommend programs, policies, and activities of the Federal Government in the light of the policies and priorities set forth in section 102 of this Act; and (2) are sensitive to the economic, social, esthetic, and cultural needs and interests of the Nation.

(c) Any Associate Director appointed by the President shall perform such functions as the Director may from time to time prescribe.

FEDERAL INVESTMENT AND PRIORITIES

SEC. 204. (a)(1) Within its first year of operation, the Office shall, to the extent practicable, within the limitations of available knowledge and resources, prepare a five-year forecast of estimated levels of Federal investment in science, engineering, and technology in accordance with established national policies and priorities, including those policies and priorities declared in section 102 of this Act.

(2) The forecast shall include estimates, for each year included in the forecast, of the allocation of Federal funds among major expenditure areas in science, engineering, and technology.

(b) The Office shall annually revise the five-year forecast developed under subsection (a) of this section so that it takes appropriate account of changing national needs and circumstances, and extend the forecast so that it always extends five years into the future.

(c) The Office shall annually appraise progress in science, engineering, and technology in relation to the needs of the Nation and the five-year forecasts developed under subsections (a) and (b) of this section and shall estimate a range of options for various levels of Federal investment in science, engineering, and technology for the fiscal year immediately following the fiscal year in which such estimates

GERALD R. FORD LIBRARY

are made, including among the options that level of Federal investment which would assure optimum utilization of the Nation's science, engineering, and technology resources.

(d) The Office shall annually assess alternative uses of Federal funds for science, engineering, and technology in relation to scientific, engineering, and technical opportunities and national needs and the five-year forecasts developed under subsections (a) and (b) of this section, and on the basis thereof shall prepare a range of priority options for allocating Federal funds among major expenditure areas in science, engineering, and technology, which pertain to the fiscal year immediately following the fiscal year in which such priorities are prepared.

(e) The Director shall furnish the options prepared under subsections (c) and (d) of this section, together with necessary supporting analyses and data, to the Office of Management and Budget for use in developing budget recommendations to the President.

POLICY PLANNING, ANALYSIS, AND ADVICE

SEC. 205. The Office shall serve as a source of scientific, engineering, and technological analysis and judgment for the President with respect to major policies, plans, and programs of the Federal Government. In carrying out this function, the Director shall—

(1) seek to define coherent approaches for applying science, engineering, and technology to critical and emerging national and international problems and for promoting coordination of the scientific, engineering, and technological responsibilities and programs of the Federal departments and agencies in the resolution of such problems;

(2) assist and advise the President in the preparation of the Science, Engineering, and Technology Report, in accordance with section 208 of this Act;

(3) gather timely and authoritative information concerning significant developments and trends in science. engineering, technology, and in national priorities, both current and prospective, to analyze and interpret such information for the purpose of determining whether such developments and trends are likely to affect achievement of the priority needs set forth in section 102(5) of this Act;

(4) encourage the development and maintenance of an adequate data base for human resources in science, engineering, and technology, including the development of appropriate models to forecast future manpower requirements, and assess the impact of major govern-

mental and public programs on human resources and their utilization;

(5) initiate studies and analyses, including systems analyses and technology assessments, of alternatives available for the resolution of critical and emerging national and international problems amenable to the contributions of science, engineering, and technology and, insofar as possible, determine and compare probable costs, benefits, and impacts of such alternatives;

(6) advise the President on the extent to which the various scientific and technical programs, policies, and activities of the Federal Government are likely to affect the achievement of the priority needs of the Nation as set forth in section 102(5) of this Act;

(7) provide the President with periodic reviews of Federal statutes and administrative regulations of the various departments and agencies which affect research and development activities, both internally and in relation to the private sector, or which may interfere with desirable technological innovation, together with recommendations for the elimination, reform, or updating, as appropriate, of such statutes and regulations;

(8) develop, review, revise, and recommend criteria for determining scientific, engineering, and technological activities warranting Federal support, and recommend

Federal policies designed to advance (A) the development and maintenance of broadly based scientific, engineering, and technological capabilities, including human resources, at all levels of government, academia, and industry, and (B) the effective application of such capabilities to national needs;

(9) assess and advise on policies for international cooperation in science, engineering, and technology which will advance the national and international objectives of the United States;

(10) identify and assess emerging and future areas in which science, engineering, and technology can be used effectively in addressing national and international problems;

(11) report at least once each year to the President on the overall activities and accomplishments of the Office, pursuant to section 208 of this Act; and

(12) perform such other duties and functions and make and furnish such studies and reports thereon, and recommendations with respect to matters of policy and legislation as the President may request.

ADDITIONAL FUNCTIONS OF THE DIRECTOR

SEC. 206. (a) The Director shall, in addition to the other duties and functions set forth in this title—

(1) serve as Chairman of the Federal Coordinating

Group for Science, Engineering, and Technology established under title IV;

(2) serve as a member of the Domestic Council; and

(3) serve as a member of the Intergovernmental Science, Engineering, and Technology Advisory Panel established under title V of this Act.

(b) For the purpose of assuring the optimum contribution of science, engineering, and technology to the national security, the Director, at the request of the National Security Council, shall advise the National Security Council in such matters concerning science, engineering, and technology as relate to national security.

(c) The Director, in order to fulfill his functions under this title, is authorized to—

(1) appoint, assign the duties, and fix the compensation of personnel without regard to the provisions of title 5, United States Code, governing appointments in the competitive service, and without regard to the provisions of chapter 51 and subchapter III of chapter 53 of such title, relating to classification and General Schedule pay rates, at rates not in excess of the rate prescribed for GS–18 of the General Schedule under section 5332 of such title; and

(2) enter into contracts and other arrangements for studies, analyses, and other services with public agencies

and with private persons, organizations, or institutions, and make such payments as he deems necessary to carry out the provisions of this Act without legal consideration, without performance bonds, and without regard to section 3709 of the Revised Statutes (41 U.S.C. 5).

COORDINATION WITH OTHER ORGANIZATIONS

SEC. 207. (a) In exercising his functions under this title, the Director shall—

(1) work in close consultation and cooperation with the Domestic Council, the National Security Council, the Council on Environmental Quality, the Council of Economic Advisers, the Office of Management and Budget, and the Federal departments and agencies;

(2) utilize the services of consultants, establish such advisory panels, and, to the extent practicable, consult with State and local governmental agencies, with appropriate professional groups, and with such representatives of industry, the universities, agriculture, labor, consumers, conservation organizations, and such other public interest groups, organizations, and individuals as he deems advisable;

(3) hold such hearings in various parts of the Nation as he deems necessary, to determine the views of the agencies, groups, and organizations referred to in paragraph (2) of this subsection and of the general public,

concerning national needs and trends in science, engineering, and technology; and

(4) utilize with their consent to the fullest extent possible the services, personnel, equipment, facilities, and information (including statistical informaton) of public and private agencies and organizations, and individuals, in order to avoid duplication of effort and expense, and may transfer funds made available pursuant to this act to other Federal agencies as reimbursement for the utilization of such personnel, services, facilities, equipment, and information.

(b) Each department, agency, and instrumentality of the Executive Branch of the Government, including any independent agency, is authorized to furnish the Director such information as the Director deems necessary to carry out his functions under this title.

(c) Upon request, the Administrator of the National Aeronautics and Space Administration is authorized to assist the Director with respect to carrying out his activities conducted under paragraph (5) of section 205 of this Act.

SCIENCE, ENGINEERING, AND TECHNOLOGY REPORT

SEC. 208. (a) The President shall transmit annually to the Congress, beginning February 15, 1977, a Science, Engineering, and Technology Report (hereinafter referred to as the "Report") which shall be prepared by the Office, with

appropriate assistance from the departments and agencies and such consultants and contractors as the Director deems necessary. The report shall include the estimates on Federal investment level and proposed priorities in science, engineering, and technology, prepared by the Director pursuant to section 204 of this Act, and to the extent practicable, within the limitations of available knowledge and resources, include such issues as—

(1) a review of developments of national significance in science, engineering, and technology;

(2) the significant effects of current and projected trends in science, engineering, and technology on the social, economic, and other requirements of the Nation;

(3) a review and appraisal of selected science-, engineering-, and technology-related programs, policies, and activities of the Federal Government;

(4) an inventory and forecast of critical and emerging national problems the resolution of which might be substantially assisted by the application of science, engineering, and technology;

(5) the identification and assessment of scientific, engineering, and technological measures that can contribute to the resolution of such problems, in light of the related social, economic, political, and institutional considerations;

(6) the existing and projected scientific, engineering, and technological resources, including specialized manpower, that could contribute to the resolution of such problems; and

(7) recommendations for legislation on science-, engineering-, and technology-related programs and policies that will contribute to the resolution of such problems.

(b) In preparing the Report under subsection (a) of this section, the Office shall make maximum use of relevant data available from the National Science Foundation and other government departments and agencies.

(c) The Director shall insure that the Report, in the form approved by the President, is printed and made available as a public document.

TITLE III—PRESIDENT'S ADVISORY COMMITTEE ON SCIENCE, ENGINEERING, AND TECHNOLOGY

ESTABLISHMENT

SEC. 301. The President is authorized to establish within the Executive Office of the President a President's Advisory Committee on Science, Engineering, and Technology (hereinafter referred to as the "Committee").

MEMBERSHIP

SEC. 302. (a) The Committee shall consist of—

(1) the Director of the Office of Science, Engineering, and Technology Policy established under title II of this Act; and

(2) not less than eight nor more than fourteen other members appointed by the President.

(b) Members of the Committee appointed by the President pursuant to subsection (a)(1) of this section shall—

(1) be exceptionally qualified and distinguished in science, engineering, technology, information dissemination, education, management, labor, or public affairs;

(2) be highly capable of critically assessing the policies, priorities, programs, and activities of the Nation, with respect to the findings, policies, and purposes set forth in title I; and

(3) shall collectively constitute a balanced composition with respect to (A) fields of science and engineering, (B) academic, industrial, and government experience, and (C) business, labor, consumer, and public interest points of view.

(c) The President shall appoint one member of the Committee to serve as Chairman and another member to serve as Vice Chairman for such periods as the President may determine.

(d) Each member of the Committee who is not an officer of the Federal Government shall, while serving on business of the Committee, be entitled to receive compensation at a

rate not to exceed the daily rate prescribed for GS–18 of the General Schedule under section 5332 of title 5, United States Code, including traveltime, and while so serving away from his home or regular place of business he may be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as the expenses authorized by section 5703(b) of title 5, United States Code, for persons in Government service employed intermittently.

FEDERAL SCIENCE, ENGINEERING, AND TECHNOLOGY SURVEY

SEC. 303. (a) The Committee shall survey, examine, and analyze the overall context of the Federal science, engineering, and technology effort including missions, goals, personnel, funding, organization, facilities, and activities in general, taking adequate account of the interests of individuals and groups that may be affected by Federal scientific, engineering, and technical programs, including, as appropriate, consultation with such individuals and groups. In carrying out its functions under this section, the Committee shall consider needs for—

(1) the establishment of such new departments, agencies, offices, or other organizations as may serve to strengthen the Nation's scientific, engineering, and technical capabilities and increase the effectiveness of their application to the solution of national problems;

(2) improvements in existing systems for handling scientific, engineering, and technical information on a Government-wide basis, including consideration of the appropriate role to be played by the private sector in the dissemination of such information;

(3) improved technology assessment in the executive branch of the Federal Government;

(4) improved methods for effecting technology innovation, transfer, and use;

(5) stimulating more effective Federal-State and Federal-industry liaison and cooperation in science, engineering, and technology;

(6) reduction and simplification of Federal regulations and administrative practices and procedures which may have the effect of retarding technological innovation or opportunities for its utilization;

(7) a broader base for support of basic research;

(8) ways of strengthening the Nation's academic institutions' capabilities for research and education in science, engineering, and technology;

(9) ways and means of effectively integrating scientific, engineering, and technological factors into our national and international policies;

(10) technology designed to meet community and individual needs;

(11) maintenance of adequate scientific, engineering, and technological manpower with regard to both quality and quantity;

(12) improved systems for planning and analysis of the Federal science, engineering, and technology programs; and

(13) long-range study, analysis, and planning in regard to the application of science, engineering, and technology to major national problems or concerns.

(b)(1) Within one year of the appointment of a majority of its members, the Committee shall submit a report to the President of its activities, findings, conclusions, and recommendations including such supporting data and material as may be necessary.

(2) After appropriate review of the report submitted under paragraph (1) of this subsection, the President shall transmit the report to the Congress, together with any recommendations he may wish to make concerning its findings.

CONTINUATION OF COMMITTEE

SEC. 304. (a) Ninety days after transmission of the report prepared under section 303, the Committee shall cease to exist, unless the President, before the expiration of the ninety-day period, makes a determination that it is advantageous for the Committee to continue in being.

(b) If the President determines that it is advantageous for the Committee to continue in being, (1) the Committee

shall continue in being and shall exercise such functions as are prescribed by the President; and (2) the members of the Committee shall serve at the pleasure of the President.

STAFF AND CONSULTANT SUPPORT

SEC. 305. (a) In the performance of its functions under sections 303 and 304, the Committee is authorized—

(1) to select, appoint, employ, and fix the compensation of such specialists and other experts as may be necessary for the carrying out of its functions under this Act, in accordance with section 3109 of title 5, United States Code (but without regard to the last sentence thereof);

(2) to appoint, assign the duties, and fix the compensation of personnel without regard to the provisions of title 5, United States Code, governing appointments in the competitive service, and without regard to the provisions of chapter 51 and subchapter III of chapter 53 of such title, relating to classification and General Schedule pay rates, at rates not in excess of the rate prescribed for GS–18 of the General Schedule under section 5332 of such title; and

(3) to provide for the participation of such civilian and military personnel as may be detailed to the Committee pursuant to subsection (b) of this section for carrying out the functions of the Committee.

(b) Upon request of the Committee, the head of any Federal department, agency, or instrumentality is authorized (1) to furnish to the Committee such information as may be necessary for carrying out its functions and as may be available to or procurable by such department, agency, or instrumentality, and (2) to detail to temporary duty with the Committee on a reimbursable basis such personnel within his administrative jurisdiction as it may need or believe to be useful for carrying out its functions. Each such detail shall be without loss of seniority, pay, or other employee status, to civilian employees so detailed, and without loss of status, rank, office, or grade, or of any emolument, perquisite, right, privilege or benefit incident thereto to military personnel so detailed. Each such detail shall be made pursuant to an agreement between the Chairman and the head of the relevant department, agency, or instrumentality, and shall be in accordance with the provisions of subchapter III of chapter 33, title 5, United States Code.

TITLE IV—FEDERAL COORDINATING GROUP FOR SCIENCE, ENGINEERING, AND TECHNOLOGY

ESTABLISHMENT AND FUNCTIONS

SEC. 401. (a) There is established the Federal Coordinating Group for Science, Engineering, and Technology (hereinafter referred to as the "Group").

(b) The Group shall be composed of the Director of the Office of Science, Engineering, and Technology Policy and one representative of each of the following Federal agencies: Department of Agriculture, Department of Commerce, Department of Defense, Department of Health, Education, and Welfare, Department of Housing and Urban Development, Department of the Interior, Department of State, Department of Transportation, Veterans' Administration, Nuclear Regulatory Commission, National Aeronautics and Space Administration, National Oceanic and Atmospheric Administration, National Science Foundation, Environmental Protection Agency, and Energy Research and Development Administration. Each such representative shall be an official of policy rank designated by the head of the Federal agency concerned.

(c) The Director of the Office of Science, Engineering, and Technology Policy shall serve as Chairman of the Group. The Chairman may make provision for another member of the Group to act temporarily in the Chairman's absence as Chairman of the Group.

(d) The Chairman may (1) request the head of any Federal agency not named in subsection (b) of this section to designate a representative to participate in meetings or parts of meetings of the Group concerned with matters of substantial interest to such agency, and (2) invite other persons to attend meetings of the Group.

GERALD R. FORD LIBRARY

(e) The Group shall consider problems and developments in the fields of science, engineering, and technology and related activities affecting more than one Federal agency, and shall recommend policies and other measures designed to—

(1) provide more effective planning and administration of Federal scientific, engineering, and technological programs,

(2) identify research needs including areas of research requiring additional emphasis,

(3) achieve more effective utilization of the scientific, engineering, and technological resources and facilities of Federal agencies, including the elimination of unnecessary duplication, and

(4) further international cooperation in science, engineering, and technology.

(f) The Group shall perform such other related advisory duties as shall be assigned by the President or by the Chairman.

(g) For the purpose of carrying out the provisions of this section, each Federal agency represented on the Group shall furnish necessary assistance to the Group. Such assistance may include—

(1) detailing employees to the Group to perform

such functions, consistent with the purposes of this section, as the Chairman may assign to them, and

(2) undertaking, upon request of the Chairman, such special studies for the Group as come within the functions herein assigned to the Group.

(h) For the purpose of conducting studies and making reports as directed by the Chairman, standing subcommittees and panels of the Group may be established.

ABOLITION OF FEDERAL COUNCIL FOR SCIENCE AND TECHNOLOGY

SEC. 402. The Federal Council for Science and Technology, established pursuant to Executive Order 10807, issued March 13, 1959, as amended by Executive Order 11381, issued November 8, 1967, is hereby abolished.

TITLE V—STATE AND REGIONAL SCIENCE AND TECHNOLOGY PROGRAM

ESTABLISHMENT OF INTERGOVERNMENTAL SCIENCE, ENGINEERING, AND TECHNOLOGY ADVISORY PANEL

SEC. 501. (a) There is established within the Office an Intergovernmental Science, Engineering, and Technology Advisory Panel (hereinafter referred to as the "Panel").

(b) The Panel shall be composed of members as follows:

(1) One member from each State, to be appointed by the Governor of that State.

(2) The Director of the National Science Foundation or his representative.

(3) The Director or his representative.

In making appointments under this subsection, the Governor of each State shall appoint individuals who are familiar with State and local needs, who would be effective in serving as a liasion between the State and the Federal Government, and, to the extent practicable, are familiar with science, engineering, and technology issues.

(c) Each appointed member of the Panel shall, while serving on business of the Panel, be entitled to receive compensation at a rate not to exceed the daily rate prescribed for GS–18 of the General Schedule under section 5332 of title V, United States Code, including traveltime, and while so serving away from his home or regular place of business, he may be allowed travel expenses, including per diem in lieu of subsistence in the same manner as the expenses authorized by section 5703(b) of title V, United States Code, for persons in Government service employed intermittently.

(d) The Director, or his representative, shall serve as Chairman of the Panel.

(e) The Panel shall perform such functions as the Chairman may prescribe, and shall meet at the call of the Chairman.

FUNCTIONS OF THE PANEL.

SEC. 502. (a) The Panel shall advise and assist the Director in—

(1) identifying and defining civilian problems at the State, regional, and local levels to whose solution or amelioration the application of science, engineering, and technology may contribute;

(2) establishing priorities for addressing the problems identified in paragraph (1); and

(3) identifying and fostering ways to facilitate the transfer and utilization of results of Federal research and development activities so as to maximize their application to civilian needs.

GRANTS FOR STATE SCIENCE, ENGINEERING, AND TECHNOLOGY ADVISORY PROGRAMS

SEC. 503. (a) From funds authorized under section 602 of this title, the Director of the National Science Foundation, after consultation with the Panel, is authorized to make grants of not to exceed $200,000 to any State to pay a part of the costs of establishing or strengthening offices of State science, engineering, and technology within the executive and legislative branches of the State government.

(b) The purpose of any such office shall be to promote the

wise application of science, engineering, and technology to meeting the needs of the State and its political subdivisions, by providing assistance and advice to the Governor or the legislature of such State, as appropriate.

(c) No grant authorized under this section for the establishment or strengthening of an office of State science, engineering, and technology may exceed $100,000.

(d) No grant may be authorized under this section unless an application is submitted at such time, in such manner, and containing or accompanied by such information as the Director of the National Science Foundation shall require. Each such application shall contain provisions to assure that—

(1) the office for which assistance is sought under the application will (A) be headed by an official who, by reason of education and experience, is qualified to advise the Governor or legislature of a State, as appropriate, on the application of science, engineering, and technology to meeting the needs of the State and its political subdivisions, and (B) have sufficient authority, consistent with State law, to carry out any functions assigned to that office pursuant to this title; and

(2) it is the applicant's stated intention that the State will assume the costs of any office established or strengthened pursuant to this title not later than two years after the year in which the grant is made.

(e) The Director of the National Science Foundation shall approve any application which meets requirements of subsection (d) of this section, and shall not disapprove any application without affording an opportunity for a hearing.

(f)(1) The Director of the National Science Foundation shall pay to each State having an application approved under subsection (e) of this section the Federal share of the cost of that application.

(2) For each fiscal year the Federal share shall be 80 per centum.

(3) Any application submitted pursuant to this section shall not be funded unless such application is submitted to the Director of the National Science Foundation prior to thirty-six months after the date of enactment of this Act.

TITLE VI—GENERAL PROVISIONS

DEFINITIONS

SEC. 601. As used in this Act:

(1) The term "Office" means the Office of Science, Engineering, and Technology Policy.

(2) The term "Director" means the Director of the Office of Science, Engineering, and Technology Policy.

(3) The term "Committee" means the President's Advisory Committee on Science, Engineering, and Technology.

(4) The term "Group" means the Federal Coordinating Group for Science, Engineering, and Technology.

(5) The term "Panel" means the Intergovernmental Science, Engineering, and Technology Advisory Panel.

(6) The term "Foundation" means the National Science Foundation.

(7) The term "State" means each of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Trust Territory of the Pacific Islands.

AUTHORIZATION OF APPROPRIATIONS

SEC. 602. (a) There are authorized to be appropriated $4,000,000 for the fiscal year 1976, of which $1,000,000 shall be available to carry out the provisions of title II, $1,000,000 shall be available to carry out the provisions of title III, and $2,000,000 shall be available to carry out the provisions of title V; $1,500,000 for the period beginning July 1, 1976, and ending September 30, 1976, of which $250,000 shall be available to carry out the provisions of title II, $250,000 shall be available to carry out the provisions of title III, and $1,000,000 shall be available to carry out the provisions of title V; and $12,000,000 for the fiscal year 1977, of which $3,000,000 shall be available to carry out the provisions of title II, $1,000,000 shall be available to carry out the provisions of title III, and $8,000,000 shall be available to carry out the provisions of title V.

(b) Funds appropriated pursuant to subsection (a) of this section shall remain available for obligation, for expenditure, or for obligation and expenditure, for such period or periods as may be specified in Acts making such appropriations.

REPEALER

SEC. 603. Sections 1, 2, 3, and 4 of Reorganization Plan Numbered 2 of 1962 (76 Stat. 1253) and section 2 of Reorganization Plan Numbered 1 of 1973 (87 Stat. 1089) are repealed.

Calendar No. 596

94TH CONGRESS
2D SESSION

S. 32

[Report No. 94–622]

A BILL

To establish a framework for the formulation of national policy and priorities for science and technology, and for other purposes.

By Mr. KENNEDY, Mr. MOSS, Mr. TUNNEY, Mr. BENTSEN, Mr. BROOKE, Mr. CANNON, Mr. CASE, Mr. CHURCH, Mr. CRANSTON, Mr. CULVER, Mr. GRAVEL, Mr. PHILIP A. HART, Mr. HATFIELD, Mr. HATHAWAY, Mr. HUMPHREY, Mr. INOUYE, Mr. JAVITS, Mr. JOHNSTON, Mr. LEAHY, Mr. MCGEE, Mr. MCGOVERN, Mr. MAGNUSON, Mr. MANSFIELD, Mr. METCALF, Mr. MONDALE, Mr. MONTOYA, Mr. MUSKIE, Mr. PELL, Mr. RANDOLPH, Mr. SPARKMAN, Mr. STAFFORD, Mr. WEICKER, and Mr. WILLIAMS

JANUARY 15, 1975

Read twice and, by unanimous consent, referred to the Committees on Labor and Public Welfare, Commerce, and Aeronautical and Space Sciences

FEBRUARY 3, 1976

Reported with an amendment

THE WHITE HOUSE
WASHINGTON

These materials were
brought over by Mr. Farrell
this morning.

Their association's testimony
is marked in red.

j

THE **INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.**

LEONARD B. FARRELL

DIRECTOR
PROFESSIONAL SERVICES

2029 K STREET N.W. WASHINGTON, D.C. 20006

(202) 785-0017

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

345 EAST 47TH STREET, NEW YORK, N.Y. 10017 AREA CODE 212 752-6800

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

A Brief Description

The Institute of Electrical and Electronics Engineers, Inc. (IEEE) is the world's largest professional engineering society with over 170,000 members. The organization's charter dates back to 1884 with the formation of the American Institute of Electrical Engineers. The name was changed to IEEE, when they merged with the Institute of Radio Engineers in 1963.

IEEE is organized geographically and by technical fields. Student members are located in Branches at more than 400 colleges and universities throughout the world.

Until 1973, the IEEE was concerned principally with scientific and educational affairs including the publication of journals, holding of scientific and technical meetings, and provisions for the continuing education of its members.

With the passage of new Constitutional Amendments, the IEEE will also be able to be involved more directly in the social implications of technology by professional activities in connection with legislation, employment, public relations, and social and political contributions to society.

IEEE publishes over one-tenth of the world's literature in electrical and electronics engineering. Other methods employed to keep the engineers informed include: sponsoring meetings, conferences and conventions for presentation and discussion of technical papers; holding special educational seminars, workshops and courses; and providing recorded tape cassettes of special interest topics and selected meetings, for the engineer to absorb at his convenience.

IEEE publishes Spectrum, a journal of timely technical articles of major interest; Proceedings of the IEEE, containing scholarly papers of broad significance; Transactions and Journals as well as IEEE International Convention Digest, Abstracts and other publications.

GERALD R. FORD LIBRARY

Calendar No. 596

94TH CONGRESS
2d Session
SENATE
REPORT
No. 94-622

NATIONAL POLICY, ORGANIZATION, AND PRIORITIES FOR SCIENCE, ENGINEERING, AND TECHNOLOGY ACT OF 1976

FEBRUARY 3, 1976.—Ordered to be printed

Mr. KENNEDY, from the Committee on Labor and Public Welfare, the Committee on Commerce, and the Committee on Aeronautical and Space Sciences, submitted the following

JOINT REPORT

[To accompany S. 32]

The Committee on Labor and Public Welfare, the Committee on Commerce, and the Committee on Aeronautical and Space Sciences, to which was referred the bill (S. 32) to establish a framework for the formulation of national policy and priorities for science and technology, and for other purposes, having considered the same, report favorably thereon with an amendment in the nature of a substitute and recommend that the bill, as amended, do pass.

COMMITTEE AMENDMENT

The amendment is as follows:

That this Act may be cited as the "National Policy, Organization, and Priorities for Science, Engineering, and Technology Act of 1976".

TITLE I—NATIONAL SCIENCE, ENGINEERING, AND TECHNOLOGY POLICY AND PRIORITIES

FINDINGS

SEC. 101. The Congress, recognizing the profound impact of science, engineering, and technology on society, and the interrelations of scientific, engineering, technological, eco-

57-010 O

GERALD R. FORD LIBRARY

nomic, social, political, international, and institutional factors, hereby finds that—

(1) Federal funding for science, engineering, and technology represents an investment in the future which is indispensable to sustain national progress and human betterment;

(2) the manpower pool of scientists, engineers, and technicians constitutes an invaluable national resource which should be utilized to the fullest extent possible;

(3) the scientific, engineering, and technological capabilities within the United States, when properly fostered, applied, and directed, can effectively assist in improving the quality of life, in anticipating and resolving many critical and emerging international, national, and local problems, in strengthening America's international economic competitive position, and in furthering the Nation's foreign policy objectives;

(4) strong participation by State and local governments is essential to the successful solution of many civilian problems, and in developing programs for the application of science, engineering, and technology to civilian needs and to setting priorities for civilian research and development activities;

(5) the widespread influence of technology in society requires sound planning and management to meet human needs;

(6) the maintenance and strengthening of diversified scientific, engineering, and technological capabilities in government, industry, and the universities, and the encouragement of independent initiatives based on such capabilities, are essential to the most effective use of science, engineering, and technology in resolving critical and emerging national problems;

(7) a systematic approach is needed to identify and anticipate critical and emerging national problems and to analyze, plan, and coordinate Federal science, engineering, and technology programs, policies, and activities intended to contribute to the resolution of such problems, including long-range, inclusive planning as well as intermediate and short-range program development; and

(8) the effectiveness of scientific, engineering, and technological contributions to the achievement of national goals depends on the maintenance of a strong base of knowledge in science, engineering, and advanced technology together with a resource of highly qualified scientists and engineers.

DECLARATION OF POLICIES AND PRIORITIES

SEC. 102. The Congress declares that it is the continuing policy and responsibility of the Federal Government to take appropriate measures to achieve the following goals:

(1) There must be a continuing national investment in science, engineering, and technology adequate to the needs of the Nation.

(2) The level of this investment must be commensurate with national needs and opportunities and the prevalent economic situation.

(3) The Federal Government must promote the effective and efficient utilization in the national interest of the Nation's human resources in science, engineering, and technology.

(4) The Nation's capabilities for technology assessment and for technological planning and policy formulation must be strengthened at both Federal and State levels.

(5) The Federal investment in science, engineering, and technology must be used to help meet the priority needs of the Nation, including but not limited to—

(A) maintaining the Nation's strength in basic and applied research and education in science and engineering;

(B) assuring widespread dissemination of scientific, engineering, and technological knowledge;

(C) utilizing science, engineering, and technology in support of the Nation's domestic and foreign policy goals;

(D) promoting the conservation and efficient utilization of the Nation's natural and human resources;

(E) providing for the protection of the oceans and the coastal zones, and the efficient utilization of their resources;

(F) strengthening the economy and promoting full employment through useful technological innovations;

(G) assuring an adequate supply of food, materials, and energy for the Nation's needs;

(H) strengthening the national security;

(I) improving the quality of health care available to all United States citizens;

(J) improving the Nation's transportation and communication services;

(K) increasing the quality of educational opportunities available to all United States citizens.

(L) assuring the provision of effective public services throughout urban, suburban, and rural areas in fields such as public safety, firefighting, and sanitation;

(M) developing high-quality, low-cost housing systems;

(N) eliminating air and water pollution and unnecessary, unhealthful, or ineffective drugs and food additives; and

(O) enhancing the quality of the environment.

DECLARATION OF PURPOSE

SEC. 103. It is declared to be the purpose of this Act to promote the effective application of science, engineering, and technology to the furtherance of national goals by—

(1) establishing, in the Executive Office of the President, an Office of Science, Engineering, and Technology Policy to provide a continuing source of science, engineering, and technology policy analysis and judgment to the President;

(2) establishing a State and Regional Science, Engineering, and Technology Program to foster the application of science, engineering, and technology to State and regional needs;

(3) establishing an Interagency Federal Coordinating Group on Science, Engineering, and Technology to coordinate agency research and development efforts; and

(4) having the President submit an annual Science, Engineering, and Technology Report to the Congress.

TITLE II—OFFICE OF SCIENCE, ENGINEERING, AND TECHNOLOGY POLICY

ESTABLISHMENT

SEC. 201. There is established in the Executive Office of the President an Office of Science, Engineering, and Technology Policy (hereinafter referred to as the "Office").

DIRECTOR

SEC. 202. (a) The Office shall be administered by a Director who shall be appointed by the President, by and with the advice and consent of the Senate, and who shall be compensated at the rate provided for level II of the Executive Schedule in section 5313 of title 5, United States Code.

(b) The President shall choose a Director from among individuals who (1) by reason of their training, experience, and attainments, are exceptionally qualified to analyze and interpret the implications of scientific, engineering, and technological development and to appraise and recommend programs, policies, and activities of the Federal Government in the light of the policies and priorities set forth in section 102 of this Act; and (2) are sensitive to the economic, social, esthetic, and cultural needs and interests of the Nation.

ASSOCIATE DIRECTORS

SEC. 203. (a) The President is authorized to appoint not to exceed four Associate Directors, by and with the advice and consent of the Senate, and who shall be compensated at a rate not to exceed level III of the Executive Schedule in section 5314 of title 5, United States Code.

(b) Any Associate Director appointed by the President shall be chosen from among individuals who (1) by reason of their training, experience, and attainments, are exceptionally qualified to analyze and interpret the implications of scientific, engineering, and technological development and to appraise and recommend programs, policies, and activities of the Federal Government in the light of the policies and priorities set forth in section 102 of this Act; and (2) are sensitive to the economic, social, esthetic, and cultural needs and interests of the Nation.

(c) Any Associate Director appointed by the President shall perform such functions as the Director may from time to time prescribe.

FEDERAL INVESTMENT AND PRIORITIES

SEC. 204. (a)(1) Within its first year of operation, the Office shall, to the extent practicable, within the limitations of available knowledge and resources, prepare a five-year forecast of estimated levels of Federal investment in science, engineering, and technology in accordance with established national policies and priorities, including those policies and priorities declared in section 102 of this Act.

(2) The forecast shall include estimates, for each year included in the forecast, of the allocation of Federal funds among major expenditure areas in science, engineering, and technology.

(b) The Office shall annually revise the five-year forecast developed under subsection (a) of this section so that it takes appropriate account of changing national needs and circumstances, and extend the forecast so that it always extends five years into the future.

(c) The Office shall annually appraise progress in science, engineering, and technology in relation to the needs of the Nation and the five-year forecasts developed under subsections (a) and (b) of this section and shall estimate a range of options for various levels of Federal investment in science, engineering, and technology for the fiscal year immediately following the fiscal year in which such estimates are made, including among the options that level of Federal investment which would assure optimum utilization of the Nation's science, engineering, and technology resources.

(d) The Office shall annually assess alternative uses of Federal funds for science, engineering, and technology in relation to scientific, engineering, and technical opportunities and national needs and the five-year forecasts developed under subsections (a) and (b) of this section, and on the basis thereof shall prepare a range of priority options for allocating Federal funds among major expenditure areas in science, engineering, and technology, which pertain to the fiscal year immediately following the fiscal year in which such priorities are prepared.

(e) The Director shall furnish the options prepared under subsections (c) and (d) of this section, together with necessary supporting analyses and data, to the Office of Management and Budget for use in developing budget recommendations to the President.

POLICY PLANNING, ANALYSIS, AND ADVICE

SEC. 205. The Office shall serve as a source of scientific, engineering, and technological analysis and judgment for the President with respect to major policies, plans, and programs of the Federal Government. In carrying out this function, the Director shall—

(1) seek to define coherent approaches for applying science, engineering, and technology to critical and emerging national and international problems and for promoting coordination of the scientific, engineering, and technological responsibilities and programs of the Federal departments and agencies in the resolution of such problems;

(2) assist and advise the President in the preparation of the Science, Engineering, and Technology Report, in accordance with section 208 of this Act;

(3) gather timely and authoritative information concerning significant developments and trends in science, engineering, technology, and in national priorities, both current and prospective, to analyze and interpret such information for the purpose of determining whether such developments and trends are likely to affect achievement of the priority needs set forth in section 102(5) of this Act;

(4) encourage the development and maintenance of an adequate data base for human resources in science, engineering, and technology, including the development of appropriate models to forecast future manpower requirements, and assess the impact of major governmental and public programs on human resources and their utilization;

(5) initiate studies and analyses, including systems analyses and technology assessments, of alternatives available for the resolution of critical and emerging national and international problems amenable to the contributions of science, engineering, and technology and, insofar as possible, determine and compare probable costs, benefits, and impacts of such alternatives;

(6) advise the President on the extent to which the various scientific and technical programs, policies, and activities of the Federal Government are likely to affect the achievement of the priority needs of the Nation as set forth in section 102(5) of this Act;

(7) provide the President with periodic reviews of Federal statutes and administrative regulations of

the various departments and agencies which affect research and development activities, both internally and in relation to the private sector, or which may interfere with desirable technological innovation, together with recommendations for the elimination, reform, or updating, as appropriate, of such statutes and regulations;

(8) develop, review, revise, and recommend criteria for determining scientific, engineering, and technological activities warranting Federal support, and recommend Federal policies designed to advance (A) the development and maintenance of broadly based scientific, engineering, and technological capabilities, including human resources, at all levels of government, academia, and industry, and (B) the effective application of such capabilities to national needs;

(9) assess and advise on policies for international cooperation in science, engineering, and technology which will advance the national and international objectives of the United States;

(10) identify and assess emerging and future areas in which science, engineering, and technology can be used effectively in addressing national and international problems;

(11) report at least once each year to the President on the overall activities and accomplishments of the Office, pursuant to section 208 of this Act; and

(12) perform such other duties and functions and make and furnish such studies and reports thereon, and recommendations with respect to matters of policy and legislation as the President may request.

ADDITIONAL FUNCTIONS OF THE DIRECTOR

SEC. 206. (a) The Director shall, in addition to the other duties and functions set forth in this title—

(1) serve as Chairman of the Federal Coordinating Group for Science, Engineering, and Technology established under title IV;

(2) serve as a member of the Domestic Council; and

(3) serve as a member of the Intergovernmental Science, Engineering, and Technology Advisory Panel established under title V of this Act.

(b) For the purpose of assuring the optimum contribution of science, engineering, and technology to the national security, the Director, at the request of the National Security Council, shall advise the National Security Council in such matters concerning science, engineering, and technology as relate to national security.

(c) The Director, in order to fulfill his functions under this title, is authorized to—

(1) appoint, assign the duties, and fix the compensation of personnel without regard to the provisions of title

5, United States Code, governing appointments in the competitive service, and without regard to the provisions of chapter 51 and subchapter III of chapter 53 of such title, relating to classification and General Schedule pay rates, at rates not in excess of the rate prescribed for GS–18 of the General Schedule under section 5332 of such title; and

(2) enter into contracts and other arrangements for studies, analyses, and other services with public agencies and with private persons, organizations, or institutions, and make such payments as he deems necessary to carry out the provisions of this Act without legal consideration, without performance bonds, and without regard to section 3709 of the Revised Statutes (41 U.S.C. 5).

COORDINATION WITH OTHER ORGANIZATIONS

SEC. 207. (a) In exercising his functions under this title, the Director shall—

(1) work in close consultation and cooperation with the Domestic Council, the National Security Council, the Council on Environmental Quality, the Council of Economic Advisers, the Office of Management and Budget, and the Federal departments and agencies;

(2) utilize the services of consultants, establish such advisory panels, and, to the extent practicable, consult with State and local governmental agencies, with appropriate professional groups, and with such representatives of industry, the universities, agriculture, labor, consumers, conservation organizations, and such other public interest groups, organizations, and individuals as he deems advisable;

(3) hold such hearings in various parts of the Nation as he deems necessary, to determine the views of the agencies, groups, and organizations referred to in paragraph (2) of this subsection and of the general public, concerning national needs and trends in science, engineering, and technology; and

(4) utilize with their consent to the fullest extent possible the services, personnel, equipment, facilities, and information (including statistical information) of public and private agencies and organizations, and individuals, in order to avoid duplication of effort and expense, and may transfer funds made available pursuant to this act to other Federal agencies as reimbursement for the utilization of such personnel, services, facilities, equipment, and information.

(b) Each department, agency, and instrumentality of the Executive Branch of the Government, including any independent agency, is authorized to furnish the Director such information as the Director deems necessary to carry out his functions under this title.

(c) Upon request, the Administrator of the National Aeronautics and Space Administration is authorized to assist the Director with respect to carrying out his activities conducted under paragraph (5) of section 205 of this Act.

SCIENCE, ENGINEERING, AND TECHNOLOGY REPORT

SEC. 208. (a) The President shall transmit annually to the Congress, beginning February 15, 1977, a Science Engineering, and Technology Report (hereinafter referred to as the "Report") which shall be prepared by the Office, with appropriate assistance from the departments and agencies and such consultants and contractors as the Director deems necessary. The report shall include the estimates on Federal investment level and proposed priorities in science, engineering, and technology, prepared by the Director pursuant to section 204 of this Act, and to the extent practicable, within the limitations of available knowledge and resources, include such issues as—

(1) a review of developments of national significance in science, engineering, and technology;

(2) the significant effects of current and projected trends in science, engineering, and technology on the social, economic, and other requirements of the Nation;

(3) a review and appraisal of selected science-, engineering-, and technology-related programs, policies, and activities of the Federal Government;

(4) an inventory and forecast of critical and emerging national problems the resolution of which might be substantially assisted by the application of science, engineering, and technology;

(5) the identification and assessment of scientific, engineering, and technological measures that can contribute to the resolution of such problems, in light of the related social, economic, political, and institutional considerations;

(6) the existing and projected scientific, engineering, and technological resources, including specialized manpower, that could contribute to the resolution of such problems; and

(7) recommendations for legislation on science, engineering-, and technology-related programs and policies that will contribute to the resolution of such problems.

(b) In preparing the Report under subsection (a) of this section, the Office shall make maximum use of relevant data available from the National Science Foundation and other government departments and agencies.

(c) The Director shall insure that the Report, in the form approved by the President, is printed and made available as a public document.

TITLE III—PRESIDENT'S ADVISORY COMMITTEE ON SCIENCE, ENGINEERING, AND TECHNOLOGY

ESTABLISHMENT

SEC. 301. The President is authorized to establish within the Executive Office of the President a President's Advisory Committee on Science, Engineering, and Technology (hereinafter referred to as the "Committee").

MEMBERSHIP

SEC. 302. (a) The Committee shall consist of—

(1) the Director of the Office of Science, Engineering, and Technology Policy established under title II of this Act; and

(2) not less than eight nor more than fourteen other members appointed by the President.

(b) Members of the Committee appointed by the President pursuant to subsection (a)(1) of this section shall—

(1) be exceptionally qualified and distinguished in science, engineering, technology, information dissemination, education, management, labor, or public affairs;

(2) be highly capable of critically assessing the policies, priorities, programs, and activities of the Nation, with respect to the findings, policies, and purposes set forth in title I; and

(3) shall collectively constitute a balanced composition with respect to (A) fields of science and engineering, (B) academic, industrial, and government experience, and (C) business, labor, consumer, and public interest points of view.

(c) The President shall appoint one member of the Committee to serve as Chairman and another member to serve as Vice Chairman for such periods as the President may determine.

(d) Each member of the Committee who is not an officer of the Federal Government shall, while serving on business of the Committee, be entitled to receive compensation at a rate not to exceed the daily rate prescribed for GS–18 of the General Schedule under section 5332 of title 5, United States Code, including traveltime, and while so serving away from his home or regular place of business he may be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as the expenses authorized by section 5703(b) of title 5, United States Code, for persons in Government service employed intermittently.

FEDERAL SCIENCE, ENGINEERING, AND TECHNOLOGY SURVEY

SEC. 303. (a) The Committee shall survey, examine, and analyze the overall context of the Federal science, engineering, and technology effort including missions, goals, personnel,

funding, organization, facilities, and activities in general, taking adequate account of the interests of individuals and groups that may be affected by Federal scientific, engineering, and technical programs, including, as appropriate, consultation with such individuals and groups. In carrying out its functions under this section, the Committee shall consider needs for—

(1) the establishment of such new departments, agencies, offices, or other organizations as may serve to strengthen the Nation's scientific, engineering, and technical capabilities and increase the effectiveness of their application to the solution of national problems;

(2) improvements in existing systems for handling scientific, engineering, and technical information on a Government-wide basis, including consideration of the appropriate role to be played by the private sector in the dissemination of such information;

(3) improved technology assessment in the executive branch of the Federal Government;

(4) improved methods for effecting technology innovation, transfer, and use;

(5) stimulating more effective Federal-State and Federal-industry liaison and cooperation in science, engineering, and technology;

(6) reduction and simplification of Federal regulations and administrative practices and procedures which may have the effect of retarding technological innovation or opportunities for its utilization;

(7) a broader base for support of basic research;

(8) ways of strengthening the Nation's academic institutions' capabilities for research and education in science, engineering, and technology;

(9) ways and means of effectively integrating scientific, engineering, and technical factors into our national and international policies;

(10) technology designed to meet community and individual needs;

(11) maintenance of adequate scientific, engineering, and technological manpower with regard to both quality and quantity;

(12) improved systems for planning and analysis of the Federal science, engineering, and technology programs; and

(13) long-range study, analysis, and planning in regard to the application of science, engineering, and technology to major national problems or concerns.

(b)(1) Within one year of the appointment of a majority of its members, the Committee shall submit a report to the President of its activities, findings, conclusions, and recommendations including such supporting data and material as may be necessary.

(2) After appropriate review of the report submitted under paragraph (1) of this subsection, the President shall transmit the report to the Congress, together with any recommendations he may wish to make concerning its findings.

CONTINUATION OF COMMITTEE

SEC. 304. (a) Ninety days after transmission of the report prepared under section 303, the Committee shall cease to exist unless the President, before the expiration of the ninety-day period, makes a determination that it is advantageous for the Committee to continue in being.

(b) If the President determines that it is advantageous for the Committee to continue in being, (1) the Committee shall continue in being and shall exercise such functions as are prescribed by the President; and (2) the members of the Committee shall serve at the pleasure of the President.

STAFF AND CONSULTANT SUPPORT

SEC. 305. (a) In the performance of its functions under sections 303 and 304, the Committee is authorized—

(1) to select, appoint, employ, and fix the compensation of such specialists and other experts as may be necessary for the carrying out of its functions under this Act, in accordance with section 3109 of title 5, United States Code (but without regard to the last sentence thereof);

(2) to appoint, assign the duties, and fix the compensation of personnel without regard to the provisions of title 5, United States Code, governing appointments in the competitive service, and without regard to the provisions of chapter 51 and subchapter III of chapter 53 of such title, relating to classification and General Schedule pay rates, at rates not in excess of the rate prescribed for GS–18 of the General Schedule under section 5332 of such title; and

(3) to provide for the participation of such civilian and military personnel as may be detailed to the Committee pursuant to subsection (b) of this section for carrying out the functions of the Committee.

(b) Upon request of the Committee, the head of any Federal department, agency, or instrumentality is authorized (1) to furnish to the Committee such information as may be necessary for carrying out its functions and as may be available to or procurable by such department, agency, or instrumentality, and (2) to detail to temporary duty with the Committee on a reimbursable basis such personnel within his administrative jurisdiction as it may need or believe to be useful for carrying out its functions. Each such detail shall be without loss of seniority, pay, or other employee status, to civilian employees so detailed, and without loss of status,

rank, office, or grade, or of any emolument, perquisite, right, privilege or benefit incident thereto to military personnel so detailed. Each such detail shall be made pursuant to an agreement between the Chairman and the head of the relevant department, agency, or instrumentality, and shall be in accordance with the provisions of subchapter III of chapter 33, title 5, United States Code.

TITLE IV—FEDERAL COORDINATING GROUP FOR SCIENCE, ENGINEERING, AND TECHNOLOGY

ESTABLISHMENT AND FUNCTIONS

SEC. 401. (a) There is established the Federal Coordinating Group for Science, Engineering, and Technology (hereinafter referred to as the "Group").

(b) The Group shall be composed of the Director of the Office of Science, Engineering, and Technology Policy and one representative of each of the following Federal agencies: Department of Agriculture, Department of Commerce, Department of Defense, Department of Health, Education, and Welfare, Department of Housing and Urban Development, Department of the Interior, Department of State, Department of Transportation, Veterans' Administration, Nuclear Regulatory Commission, National Aeronautics and Space Administration, National Oceanic and Atmospheric Administration, National Science Foundation, Environmental Protection Agency, and Energy Research and Development Administration. Each such representative shall be an official of policy rank designated by the head of the Federal agency concerned.

(c) The Director of the Office of Science, Engineering, and Technology Policy shall serve as Chairman of the Group. The Chairman may make provision for another member of the Group to act temporarily in the Chairman's absence as Chairman of the Group.

(d) The Chairman may (1) request the head of any Federal agency not named in subsection (b) of this section to designate a representative to participate in meetings or parts of meetings of the Group concerned with matters of substantial interest to such agency, and (2) invite other persons to attend meetings of the Group.

(e) The Group shall consider problems and developments in the fields of science, engineering, and technology and related activities affecting more than one Federal agency, and shall recommend policies and other measures designed to—

(1) provide more effective planning and administration of Federal scientific, engineering, and technological programs,

(2) identify research needs including areas of research requiring additional emphasis,

(3) achieve more effective utilization of the scientific, engineering, and technological resources and facilities of Federal agencies, including the elimination of unnecessary duplication, and

(4) further international cooperation in science, engineering, and technology.

(f) The Group shall perform such other related advisory duties as shall be assigned by the President or by the Chairman.

(g) For the purpose of carrying out the provisions of this section, each Federal agency represented on the Group shall furnish necessary assistance to the Group. Such assistance may include—

(1) detailing employees to the Group to perform such functions, consistent with the purposes of this section, as the Chairman may assign to them, and

(2) undertaking, upon request of the Chairman, such special studies for the Group as come within the functions herein assigned to the Group.

(h) For the purpose of conducting studies and making reports as directed by the Chairman, standing subcommittees and panels of the Group may be established.

ABOLITION OF FEDERAL COUNCIL FOR SCIENCE AND TECHNOLOGY

SEC. 402. The Federal Council for Science and Technology, established pursuant to Executive Order 10807, issued March 13, 1959, as amended by Executive Order 11381, issued November 8, 1967, is hereby abolished.

TITLE V—STATE AND REGIONAL SCIENCE AND TECHNOLOGY PROGRAM

ESTABLISHMENT OF INTERGOVERNMENTAL SCIENCE, ENGINEERING, AND TECHNOLOGY ADVISORY PANEL

SEC. 501. (a) There is established within the Office an Intergovernmental Science, Engineering, and Technology Advisory Panel (hereinafter referred to as the "Panel").

(b) The Panel shall be composed of members as follows:

(1) One member from each State, to be appointed by the Governor of that State.

(2) The Director of the National Science Foundation or his representative.

(3) The Director or his representative.

In making appointments under this subsection, the Governor of each State shall appoint individuals who are familiar with State and local needs, who would be effective in serving as a liasion between the State and the Federal Government, and, to the extent practicable, are familiar with science, engineering, and technology issues.

(c) Each appointed member of the Panel shall, while serving on business of the Panel, be entitled to receive compensation at a rate not to exceed the daily rate prescribed for GS–18 of the General Schedule under section 5332 of title V, United States Code, including traveltime, and while so serving away from his home or regular place of business, he may be allowed travel expenses, including per diem in lieu of subsistence in the same manner as the expenses authorized by section 5703(b) of title V, United States Code, for persons in Government service employed intermittently.

(d) The Director, or his representative, shall serve as Chairman of the Panel.

(e) The Panel shall perform such functions as the Chairman may prescribe, and shall meet at the call of the Chairman.

FUNCTIONS OF THE PANEL

SEC. 502. (a) The Panel shall advise and assist the Director in—

(1) identifying and defining civilian problems at the State, regional, and local levels to whose solution or amelioration the application of science, engineering, and technology may contribute;

(2) establishing priorities for addressing the problems identified in paragraph (1); and

(3) identifying and fostering ways to facilitate the transfer and utilization of results of Federal research and and development activities so as to maximize their application to civilian needs.

GRANTS FOR STATE SCIENCE, ENGINEERING, AND TECHNOLOGY ADVISORY PROGRAMS

SEC. 503. (a) From funds authorized under section 602 of this title, the Director of the National Science Foundation, after consultation with the Panel, is authorized to make grants of not to exceed $200,000 to any State to pay a part of the costs of establishing or strengthening offices of State science, engineering, and technology within the executive and legislative branches of the State government.

(b) The purpose of any such office shall be to promote the wise application of science, engineering, and technology to meeting the needs of the State and its political subdivisions, by providing assistance and advice to the Governor or the legislature of such State, as appropriate.

(c) No grant authorized under this section for the establishment or strengthening of an office of State science, engineering, and technology may exceed $100,000.

(d) No grant may be authorized under this section unless an application is submitted at such time, in such manner, and containing or accompanied by such information as the Director of the National Science Foundation shall require. Each such application shall contain provisions to assure that—

(1) the office for which assistance is sought under the application will (A) be headed by an official who, by rea-

son of education and experience, is qualified to advise the Governor or legislature of a State, as appropriate, on the application of science, engineering, and technology to meeting the needs of the State and its political subdivisions, and (B) have sufficient authority, consistent with State law, to carry out any functions assigned to that office pursuant to this title; and

(2) it is the applicant's stated intention that the State will assume the costs of any office established or strengthened pursuant to this title not later than two years after the year in which the grant is made.

(e) The Director of the National Science Foundation shall approve any application which meets requirements of subsection (d) of this section, and shall not disapprove any application without affording an opportunity for a hearing.

(f)(1) The Director of the National Science Foundation shall pay to each State having an application approved under subsection (e) of this section the Federal share of the cost of that application.

(2) For each fiscal year the Federal share shall be 80 per centum.

(3) Any application submitted pursuant to this section shall not be funded unless such application is submitted to the Director of the National Science Foundation prior to thirty-six months after the date of enactment of this Act.

TITLE VI—GENERAL PROVISIONS

DEFINITIONS

SEC. 601. As used in this Act:

(1) The term "Office" means the Office of Science, Engineering, and Technology Policy.

(2) The term "Director" means the Director of the Office of Science, Engineering, and Technology Policy.

(3) The term "Committee" means the President's Advisory Committee on Science, Engineering, and Technology.

(4) The term "Group" means the Federal Coordinating Group for Science, Engineering, and Technology.

(5) The term "Panel" means the Intergovernmental Science, Engineering, and Technology Advisory Panel.

(6) The term "Foundation" means the National Science Foundation.

(7) The term "State" means each of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Trust Territory of the Pacific Islands.

AUTHORIZATION OF APPROPRIATIONS

SEC. 602. (a) There are authorized to be appropriated $4,000,000 for the fiscal year 1976, of which $1,000,000 shall

be available to carry out the provisions of title II, $1,000,000 shall be available to carry out the provisions of title III, and $2,000,000 shall be available to carry out the provisions of title V; $1,500,000 for the period beginning July 1, 1976, and ending September 30, 1976, of which $250,000 shall be available to carry out the provisions of title II, $250,000 shall be available to carry out the provisions of title III, and $1,000,000 shall be available to carry out the provisions of title V; and $12,000,000 for the fiscal year 1977, of which $3,000,000 shall be available to carry out the provisions of title II, $1,000,000 shall be available to carry out the provisions of title III, and $8,000,000 shall be available to carry out the provisions of title V.

(b) Funds appropriated pursuant to subsection (a) of this section shall remain available for obligation, for expenditure, or for obligation and expenditure, for such period or periods as may be specified in Acts making such appropriations.

REPEALER

SEC. 603. Sections 1, 2, 3, and 4 of Reorganization Plan Numbered 2 of 1962 (76 Stat. 1253) and section 2 of Reorganization Plan Numbered 1 of 1973 (87 Stat. 1089) are repealed.

SUMMARY OF BILL

GENERAL

This Act establishes a framework for the formulation of national policy and priorities for science and technology, including the establishment of an Office of Science, Engineering, and Technology Policy in the Executive Office of the President.

TITLE I

DECLARATION OF POLICY

Title I establishes as national policy that: (a) there must be a continuing investment in science and technology directed toward the priority needs of the nation; (b) the technical manpower pool is an invaluable national resource that should be fully utilized; and (c) capabilities for technology assessment, planning, and policy formulation must be strengthened at both Federal and State levels. Title I also sets forth fifteen priority areas for allocation of the Federal investment in science and technology.

TITLE II

OFFICE OF SCIENCE, ENGINEERING, AND TECHNOLOGY POLICY

Title II establishes an Office of Science, Engineering, and Technology Policy in the Executive Office of the President, administered by a Director (at Level II of the Executive Schedule), appointed by

and with the advice and consent of the Senate. The President is authorized to appoint up to four Associate Directors (at Level III of the Executive Schedule), also with Senate confirmation.

The Office shall: prepare and annually update a five-year forecast of Federal investment in science and technology, including estimates of the allocation of Federal funds among major expenditure areas; annually estimate a range of options for various levels of Federal investment in science and technology, including a range of priority options for allocating Federal funds among major expenditure areas; and furnish the options to the Office of Management and Budget for use in developing budget recommendations to the President.

The Office shall provide the President with a continuing source of policy planning, analysis, and advice with respect to major policies, plans, and programs of science and technology of the Federal government.

The Director of the Office shall chair the Federal Coordinating Group for Science, Engineering, and Technology (established under Title IV) and the Intergovernmental Science, Engineering, and Technology Advisory Panel (established under Title V); shall serve as a member of the Domestic Council; and as an adviser to the National Security Council. The Director shall coordinate the work of the Office with the Domestic Council, NSC, CEQ, CEA, OMB, and the departments and agencies.

The Office shall prepare an annual Report on Science, Engineering, and Technology which the President shall transmit to the Congress.

TITLE III

PRESIDENT'S ADVISORY COMMITTEE ON SCIENCE, ENGINEERING, AND TECHNOLOGY

Under Title III, the President shall appoint an Advisory Committee of between 9 and 15 members, including the Director of the Office. The Committee shall conduct a comprehensive survey of Federal science and technology, and submit a report thereon to the President within one year. After receipt of the report, the Committee shall expire unless the President deems it advantageous to continue the Committee as an ongoing Advisory Committee.

TITLE IV

FEDERAL COORDINATION GROUP FOR SCIENCE, ENGINEERING, AND TECHNOLOGY

Title IV redesignates the Federal Council for Science and Technology as the Federal Coordinating Committee for Science, Engineering, and Technology, and gives it the statutory authority to coordinate Federal plans and programs in science and technology. The Director of the Office is designated as Chairman of this Group.

TITLE V

STATE AND REGIONAL SCIENCE, ENGINEERING, AND TECHNOLOGY PROGRAM

Title V establishes an Intergovernmental Science, Engineering, and Technology Advisory Panel to advise the Director in establishing priorities for addressing civilian problems at State, regional, and local levels which science and technology can help resolve. This title also establishes a State Science, Engineering, and Technology Program within the National Science Foundation to make grants of up to $200,000 to any State to enable it to establish or strengthen Offices of Science, Engineering, and Technology within the executive or legislative branches of State governments, provided that the State provides matching funding on an 80% Federal, 20% State basis.

TITLE VI

AUTHORIZATION OF APPROPRIATIONS

Title VI authorizes $4,000,000 for fiscal year 1976; $1,500,000 for the period from July 1 through September 30, 1976; and $12,000,000 for fiscal year 1977.

SECTION-BY-SECTION ANALYSIS

TITLE I—NATIONAL SCIENCE, ENGINEERING, AND TECHNOLOGY POLICY AND PRIORITIES

FINDINGS

Section 101. This section states the findings of Congress that: Federal funding for science and technology is an investment in the nation's future; the technical manpower pool is an invaluable national resource which should be fully utilized; strong participation by State and local governments is essential; diversified technical capabilities in government, industry, and the universities are essential; and a systematic approach is needed, including long-range planning, as well as intermediate and short-range program development.

DECLARATION OF POLICIES AND PRIORITIES

Section 102. This section declares it to be national policy that: there be a continuing investment in science and technology adequate to national needs; that the Federal Government must promote the utilization in the national interest of the Nation's human resources in science, engineering, and technology; capabilities for technology assessment, planning, and policy formulation must be strengthened of both Federal and State levels; the Federal investment in science and technology must be addressed to the priority needs of the Nation, including (a) national strength in research and education, (b) dissemination of technical knowledge, (c) utilizing science and technol-

ogy in support of national goals, (d) promoting conservation and efficient utilization of natural and human resources, (e) protecting the oceans and coastal zones, (f) strengthening the economy and promoting full employment, (g) assuring adequate supplies of food, materials, and energy, (h) strengthening national security, (i) improving the quality of health care, (j) improving transportation and communication services, (k) increasing educational opportunities, (l) assuring effective public services, (m) developing high-qualty, low-cost housing, (n) eliminating air and water pollution and unhealthful drugs and food additives, and (o) enhancing environmental quality.

DECLARATION OF PURPOSE

Section 103. This section declares the purpose of this Act to: (1) establish an Office of Science, Engineering, and Technology Policy in the Executive Office of the President; (2) establish a State and Regional Science, Engineering, and Technology Program; (3) establish an Interagency Federal Coordinating Group on Science, Engineering, and Technology; and (4) require the President to submit an annual Science, Engineering, and Technology Report to Congress.

TITLE II—OFFICE OF SCIENCE, ENGINEERING, AND TECHNOLOGY POLICY

ESTABLISHMENT

Section 201. This section establishes an Office of Science, Engineering, and Technology Policy in the Executive Office of the President.

DIRECTOR

Section 202. This section states that the Office shall be administered by a Director, appointed by President with the advice and consent of the Senate and compensated at the rate provided for level II of the Executive Schedule.

ASSOCIATE DIRECTORS

Section 203. This section authorizes the President to appoint with the advice and consent of the Senate, up to four Associate Directors, compensated at a rate not to exceed level III of the Executive Schedule.

FEDERAL INVESTMENT AND PRIORITIES

Section 204. This section states that the Office shall: prepare and annually update a five-year forecast of Federal investment in science, and technology, including estimates of the allocation of Federal funds among major expenditure areas; annually estimate a range of options for various levels of Federal investment in science and technology, including a range of priority options for allocating Federal

funds among major expenditure areas; and furnish the options to the Office of Management and Budget for use in developing budget recommendations to the President.

POLICY PLANNING, ANALYSIS, AND ADVICE

Section 205. This section states that the Office shall serve as a source of scientific, engineering, and technological analysis and judgment for the President with respect to major policies, plans, and programs of the Federal Government.

ADDITIONAL FUNCTIONS OF THE DIRECTOR

Section 206. This section states that the Director shall serve as Chairman of the Federal Coordinating Group for Science, Engineering, and Technology, as a member of the Domestic Council, as a member of the Intergovernmental Science, Engineering, and Technology Advisory Panel, and as a Statutory Adviser to the National Security Council in such matters concerning science, engineering, and technology as relate to national security; and that the Director is authorized to appoint and compensate personnel and enter into contracts and other arrangements for studies, analyses, and other services.

COORDINATION WITH OTHER ORGANIZATIONS

Section 207. This section states that the Director shall coordinate with the Domestic Council, the National Security Council, the Council on Environmental Quality, the Council of Economic Advisers, the Office of Management and Budget, and the Federal departments and agencies; utilize consultants and advisory panels and consult with individuals and groups throughout the society as he deems advisable; hold hearings; utilize with their consent the services of public and private agencies, organizations, and individuals, and transfer funds to other Federal agencies; that each agency of the executive branch is authorized to furnish the Director information necessary to carry out his functions; and that the Administrator of the National Aeronautics and Space Administration is authorized to assist the Director with respect to system analyses of alternative applications of science and technology.

SCIENCE, ENGINEERING, AND TECHNOLOGY REPORT

Section 208. This section states that the President shall transmit an annual Science, Engineering, and Technology Report to the Congress, individuals and groups throughout the society as he deems advisable; which shall be prepared by the Office, with appropriate assistance from other agencies, consultants, and contractors. The report shall include the Office's discussion of options on Federal investments and priorities in science and technology, and shall deal, to the extent practicable and within the limitations of available knowledge and resources, with a range of national policy issues involving science and technology.

TITLE III—PRESIDENT'S ADVISORY COMMITTEE ON SCIENCE, ENGINEERING, AND TECHNOLOGY

ESTABLISHMENT

Section 301. This section authorizes the President to establish a President's Advisory Committee on Science, Engineering, and Technology.

MEMBERSHIP

Section 302. This section states that the Committee shall consist of the Director and between eight and fourteen other members appointed by the President; that the President shall appoint a Chairman and Vice Chairman; and that the members are entitled to be reimbursed for their official expenses and to receive compensation for their services at a rate not to exceed the daily rate prescribed for GS–18 of the General Schedule.

FEDERAL SCIENCE, ENGINEERING, AND TECHNOLOGY SURVEY

Section 303. This section states that the Committee shall survey, examine, and analyze the overall context of the Federal science, engineering, and technology effort including missions, goals, personnel, funding, organization, facilities, and activities in general; that the Committee shall submit a report of its findings, conclusions, and recommendations to the President within one year of the appointment of a majority of its members; and that, after appropriate review, the President shall transmit the report to Congress, together with any recommendations he may wish to make concerning its findings.

CONTINUATION OF COMMITTEE

Section 304. This section states that the Committee will cease to exist ninety days after transmission of the report, unless the President makes a determination that it is advantageous for the Committee to continue in being, in which case the Committee shall exercise such functions as are prescribed by the President, with its members serving at the pleasure of the President.

STAFF AND CONSULTANT SUPPORT

Section 305. This section provides for appropriate staff and consultant support to the Committee.

TITLE IV—FEDERAL COORDINATING GROUP FOR SCIENCE, ENGINEERING, AND TECHNOLOGY

ESTABLISHMENT AND FUNCTIONS

Section 401. This section establishes the Federal Coordinating Group for Science, Engineering, and Technology, to be chaired by the Director, and to exercise the same functions as those heretofore exercised by the Federal Council for Science and Technology. These functions are purely advisory in nature and involve no exercise of authority over the participating agencies, whose participation is governed by their applicable statutes.

ABOLITION OF FEDERAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Section 402. This section abolishes the Federal Council for Science and Technology, which had been established by Executive Order in 1959.

TITLE V—STATE AND REGIONAL SCIENCE AND TECHNOLOGY PROGRAM

ESTABLISHMENT OF INTERGOVERNMENTAL SCIENCE, ENGINEERING, AND TECHNOLOGY ADVISORY PANEL

Section 501. This section establishes within the Office an Intergovernmental Science, Engineering, and Technology Advisory Panel, composed of the Director or his representative, the Director of the National Science Foundation or his representative, and one member from each State, to be appointed by the Governor of that State; provides for reimbursement for official expenses incurred by Panel members and for their compensation at a rate not to exceed the daily rate for GS–18 of the General Schedule; states that the Director or his representative shall serve as Chairman of the Panel; and states that the Panel shall meet at the call of the Chairman.

FUNCTIONS OF THE PANEL

Section 502. This section states that the Panel shall advise and assist the Director in identifying and defining civilian problems at the State, regional, and local levels susceptible to scientific and technical solution or amelioration; in establishing priorities for addressing such problems; and in fostering the utilization of the results of Federal research and development activities so as to maximize their application to civilian needs.

GRANTS FOR STATE SCIENCE, ENGINEERING, AND TECHNOLOGY ADVISORY PROGRAMS

Section 503. This section states: that the National Science Foundation is authorized to make grants to any State to pay a part of the costs of establishing or strengthening offices of State science, engineering, and technology within the executive and legislative branches of the State government; that the purpose of any such office shall be to promote the wise application of science and technology to the needs of the State; that no grant to a State's legislature or executive branch may exceed $100,000; that the total amount granted to any State may not exceed $200,000; that the Federal share of the cost of the office shall be 80% of the total annual cost; that the State will assume the cost of any such office not later than two years after award of the grant; that the Director of the National Science Foundation shall approve any grant application which meets the requirements of this Act and such regulations as he may establish.

TITLE VI—GENERAL PROVISIONS

DEFINITIONS

Section 601. This section defines terms used in this Act.

AUTHORIZATION OF APPROPRIATIONS

Section 602. This section authorizes appropriations to carry out the provisions of this Act of $4,000,000 for fiscal year 1976; $1,500,000 for the period from July 1, 1976 through September 30, 1976; and $12,000,000 for fiscal year 1977.

REPEALER

Section 603. This section repeals sections 1, 2, 3, and 4 of Reorganization Plan Numbered 2 of 1962 and section 2 of Reorganization Plan Numbered 1 of 1973.

LEGISLATIVE HISTORY

The Committee on Labor and Public Welfare began serious consideration of national policies and priorities for science and technology in the course of committee examination of the problems of postwar economic conversion in the Ninety-first Congress. On December 1 and 2, 1969, the Committee held hearings on Postwar Economic Conversion. The Committee heard testimony from Professor Warren L. Smith, Department of Economics, University of Michigan and former member of the Council of Economic Advisers; Dr. Seymour Melman, economist and professor of industrial engineering at Columbia University; the late Walter P. Reuther, President of the United Auto Workers; Dr. Wilfred Lewis, Jr. of the National Planning Association; the Honorable Archibald S. Alexander, former Assistant Director for Economics of the U.S. Arms Control and Disarmament Agency; and Nathanial Goldfinger, Director of Research, AFL–CIO.

Additional hearings on Postwar Economic Conversion were held before the Committee in Lexington, Massachusetts on March 23, 1970, and in Framingham, Massachusetts on April 3, 1970. At those hearings the Committee heard testimony from General James Gavin, Chairman of the Board, Arthur D. Little, Inc.; Dr. George Gols of Arthur D. Little; Carroll Sheehan, Commissioner of the Massachusetts Department of Commerce and Development; Bernard O'Keefe, President of E.G. & G. Corporation; D. Justin McCarthy, President of Framingham State College; Joseph Hyman, President of Hycor Corporation; Dr. Arthur S. Obermayer, President of Moleculon Corporation; Dr. Duncan MacDonald, business consultant; and William Alexander, President of the Research, Development, and Technical Employees Association, MIT Laboratories.

The testimony and statements for the record submitted at these hearings provided the Committee with a comprehensive background on the problems of economic conversion and a realization that national legislation was required to enable the country to build a strong base of civilian science and technology.

As Chairman of the Special Subcommittee on the National Science Foundation, Senator Edward M. Kennedy began developing legislation aimed at meeting needs in this area. On August 14, 1970, he introduced S. 4241, the Conversion Research and Education Act. Although it was not possible to hold hearings on the bill before the end of the Ninety-first Congress, the bill was subjected to close scrutiny by leading authorities in this field throughout the Nation.

After careful consideration of their comments and suggestions, the bill was revised and re-introduced by Senator Kennedy in the Ninety-second Congress on January 25, 1971, as S. 32, the Conversion, Research, Education, and Assistance Act. The bill was referred to the Committee on Labor and Public Welfare and assigned to the Subcommittee on the National Science Foundation.

The bill was circulated among leading authorities throughout the Nation who were expert in various of its aspects, and their comments and suggestions were carefully studied by the Subcommittee. At the same time a companion bill to S. 32 had been introduced in the House of Representatives as H.R. 34, by Congressmen John W. Davis and Robert N. Giaimo and one hundred and eleven cosponsors in January 1971. H.R. 34 was virtually identical to S. 32. Consequently the eight days of comprehensive hearings which the House Committee on Science and Astronautics held on H.R. 34 on June 22, 23, 24. July 13, 14, 15, and August 5 and 6, 1971 proved extremely helpful in the National Science Foundation Subcommittee's consideration of S. 32.

Based on the extensive comments and suggestions which were received over these months, from various experts and organizations throughout the country and through the House hearings, Senator Kennedy filed Amendment 469 to S. 32 on October 13, 1971. This amendment was designed to take account of many of the suggestions which the Subcommittee had received.

On October 26 and 27, 1971, the Subcommittee on the National Science Foundation held hearings on S. 32, including consideration of Amendment 469. (The hearings also considered S. 1261, the Economic Conversion Loan Authorization Act, which is still under study by the Subcommittee on the National Science Foundation.) Testimony was heard from the Administration spokesman, Dr. William D. McElroy, Director of the National Science Foundation; Paul Robbins, Executive Director of the National Society of Professional Engineers; Jack Golodner, Executive Secretary of the Council of AFL–CIO Unions for Scientific, Professional, and Cultural Employees; Sanford V. Lenz, Chairman, Professional, Technical, and Salaried Conference Board, IUE, AFL–CIO; Mrs. Betty Vetter, Executive Director, Scientific Manpower Commission; Professor Paul H. Thompson, Graduate School of Business Administration, Harvard University; and four unemployed engineers—Robert Fraser from Lincoln, Massachusetts, S. Robert Salow from Newton, Massachusetts, Charles Laible from Cherry Hill, New Jersey, and Nathan N. Budish from Seattle, Washington.

In addition to the testimony received at the hearings, the hearings record also included statements on the legislation from the Comptroller General and the Administration and from twenty-seven organizations and individuals with special competence in this area. Since the hearings record was published, scores of other statements had been received from interested organizations and individuals with respect to S.32.

Based on all of the information and the views which were received, the bill was further revised and considered by the Special Subcommitte on the National Science Foundation in an Executive Meeting on April 5, 1972. At that meeting, upon the suggestion of Senator Dominick, the Subcommittee agreed to submit the bill (in its revised form) to the Executive Agencies and the General Accounting Office for further comment. Letters were received from sixteen agencies and the GAO, and the specific comments were taken into careful account by the Subcommittee.

Based on those comments, the bill was further revised and considered again by the Subcommittee in Executive Meeting on May 30, 1972. At that meeting, the Subcommittee, without opposition, favorably reported the bill to the full Committee with an amendment in the nature of a substitute and with a title amendment.

The bill was considered by the full Committee on Labor and Public Welfare in Executive Meetings on June 21 and June 28, 1972. At the June 28 meeting, the Committee on Labor and Public Welfare ordered the bill, with a modified amendment in the nature of a substitute and with a title amendment, reported favorably to the Senate. On the roll call vote to report, all seventeen members of the Committee were recorded as voting to report the bill favorably.

On August 17, 1972, the bill was considered by the Senate, and passed by a vote of 70 to 8. It was then sent to the House of Representatives where it was referred to the Committee on Science and Astronautics. No action was taken by the House prior to the adjournment of the 92d Congress.

On January 4, 1973, Senator Kennedy reintroduced S. 32. On May 2, 1973, Senator Dominick introduced S. 1686, the Civilian Science and Technology Policy Act of 1973. Both bills were referred to the Senate Committee on Labor and Public Welfare.

S. 2495 was introduced on September 27, 1973 by Senator Magnuson, Senator Moss, and Senator Tunney. The bill was referred jointly to the Committee on Commerce and the Committee on Aeronautical and Space Sciences. On September 28, 1973 unanimous consent was given that when the two Committees report the bill, it would be re-referred to the Committee on Labor and Public Welfare.

On January 18, 1974 a working draft of a revised version of S. 2495 was prepared by the Commerce and Aeronautical and Space Sciences Committees and distributed for comments.

Joint hearings on S. 2495 and the working draft were held by the Commerce and Aeronautical and Space Sciences Committees on March 11 and March 21, 1974.

Subsequent to those hearings, the bill underwent further revisions, and Amendment No. 1537 to S. 2495 was introduced by Senators Magnuson, Moss, and Tunney on June 27, 1974. The Commerce and Aeronautical and Space Sciences Committee held a joint hearing on Amendment No. 1537 to S. 2495 on July 11, 1974. Witnesses at the July 11 hearing included four former Presidential Science Advisers: Dr. Edward E. David, Jr., Dr. Lee A. DuBridge, Dr. Donald F. Horning, and Dr. George B. Kistiakowsky.

The Commerce Committee met in Executive Session on July 31, 1974 and ordered S. 2495 reported, with an amendment in the nature

of a substitute. Identical action was taken by the Aeronautical and Space Sciences Committee at its Executive Session held September 18, 1974. On September 18, 1974, S. 2495 was referred to the Committee on Labor and Public Welfare for further consideration.

On October 8, 1974 the Special Subcommittee on the National Science Foundation held a hearing on S. 32, S. 1686 and S. 2495. Testimony was heard from the Administration spokesman, Dr. Guyford H. Stever, Director of the National Science Foundation and Science Adviser; Dr. Edward Wenk, Jr., Chairman of the Committee on Public Engineering Policy of the National Academy of Engineering; and Dr. Thomas G. Fox, Chairman of the Governor's Science Advisory Committee, State of Pennsylvania.

Based on the testimony which was presented at the hearing, the three bills were further revised and considered by the Subcommittee in an Executive Meeting on October 8, 1974. At that meeting, the Subcommittee unanimously favorably reported S. 32, to the full Committee with an amendment in the nature of a substitute and with a title amendment. All seven members of the Subcommittee were recorded as voting to report the bill to the full Committee.

The bill was considered by the full Committee on Labor and Public Welfare on October 8, 1974. The Committee ordered the bill, with an amendment in the nature of a substitute and with a title amendment, reported favorably to the Senate. All sixteen members of the Committee were recorded as voting to report the bill favorably.

The Senate passed the bill by unanimous voice vote on October 11, 1974. It was then sent to the House of Representatives where it was referred to the Committee on Science and Astronautics. No action was taken by the House prior to the adjournment of the 93rd Congress.

On January 15, 1975, Senator Kennedy reintroduced S. 32 (in a form identical to the bill that had passed the Senate in October, 1974) with the cosponsorship of Senators Moss and Tunney and 29 other Senators. This bill was referred jointly to the Committees on Labor and Public Welfare, Commerce, and Aeronautical and Space Sciences.

A significant break occurred on May 22, 1975, when President Gerald R. Ford met with Vice President Nelson A. Rockefeller, Senators Moss, Goldwater, Beall, and Laxalt, and Congressmen Teague, Mosher, Thornton, Conlan, and Symington, to announce his approval of a proposal prepared by the Vice President to re-establish the Science and Technology Office in the White House, and to do so by legislation. The President decided in favor of a single director with a small staff, rather than a council. This proposal was introduced in the Senate on June 20, 1975, as S. 1987, by Senator Moss (for himself and Senator Goldwater) (by request) and was also referred jointly to the Committees on Aeronautical and Space Sciences, Commerce, and Labor and Public Welfare. The provisions of S. 1987 were subsequently amended and incorporated in Titles II and VI of S. 32.

In the meantime, on June 6, 1975, Senator Kennedy presided at an historic White House Science Advisory Conference. At this Conference in the Dirksen Senate Office Building, the Vice President met with Senator Kennedy, as host, and Senators Moss, Tunney, Javits, Goldwater, Schweiker, Mathias, Beall, Stafford, Domenici, Laxalt, and Garn. This was the first time in modern American history that a Vice

President of the United States sat down with members of the United States Senate, in full public view, to participate in a free, informed, bipartisan discussion of national policy needs. The Conference was not a hearing and did not consider specific legislative proposals, but provided an opportunity for the Vice President and the Senators to discuss the national issues involved in the re-establishment of a White House Science Advisory Office. The Conference proved extremely useful in the subsequent development of the Senate legislation.

On October 28, November 4, and November 12, 1975, joint hearings on S. 32 were held before the Special Subcommittee on the National Science Foundation of the Committee on Labor and Public Welfare; the Special Subcommittee on Science, Technology, and Commerce of the Committee on Commerce; and the Committee on Aeronautical and Space Sciences. Senator Kennedy chaired the hearing on October 28th; Senator Tunney, the hearing on November 4th; and Senator Moss, the hearing on November 12th. During the period after the President's announcement of May 22, 1976, the House Committee on Science and Technology held extensive hearings on several science and technology policy bills, culminating in the passage of H.R. 10230 by the House on November 6, 1975. This bill was also referred jointly to the Committee on Aeronautical and Space Sciences, Commerce, and Labor and Public Welfare. Provisions of H.R. 10230 were particularly examined in the aforementioned hearing chaired by Senator Moss on November 12, 1975.

Testimony was provided by Dr. Philip Handler, President of the National Academy of Sciences; Dr. Emanuel R. Piore, Retired Vice President and Chief Scientist, IBM Corporation; Dr. Eugene B. Skolnikoff, Director of the Center for International Studies and Professor of Political Science at Massachusetts Institute of Technology; Dr. James R. Killian, Jr., author of the National Academy of Sciences "Report on Science and Technology in Presidential Policymaking"; Dr. Roger Revelle, Chairman of the Board, American Association for the Advancement of Science; Dr. Richard Scribner, Head of the Office of Special Programs of the American Association for the Advancement of Science; Dr. Thomas G. Fox, Science Adviser to the Governor of Pennsylvania; Dr. H. Guyford Stever, Director of the National Science Foundation and Science Adviser to the President; and Mr. Arthur P. Stern, President of the Institute of Electrical and Electronic Engineers.

Following the Conference with the Vice President and the hearings before the Senate Committees, the staffs of the three Committees made proposed revisions to S. 32. In developing these revisions, extensive discussions were held with representatives of the scientific and technical community and with responsible staff members of the Executive Office of the President, the National Science Foundation, and the House Committee on Science and Technology. A final version was prepared on January 19, 1976, for the consideration of the Committees.

On January 21, 1976, the Committee on Aeronautical and Space Sciences met in executive session and, without objection, ordered S. 32, with an amendment in the nature of a substitute, favorably reported to the Senate.

On January 27, 1976, the Special Subcommittee of the National Science Foundation met in executive session and voted unanimously that

S. 32, with an amendment in the nature of a substitute be reported to the full Committee on Labor and Public Welfare. On January 28, 1976, the Committee on Labor and Public Welfare met in executive session and unanimously voted favorably to report S. 32, with an amendment in the nature of a substitute, to the Senate. On January 29, 1976, the Committee on Commerce met in executive session and without objection, voted favorably to report S. 32, with an amendment in the nature of a substitute, to the Senate. The amendment in the nature of a substitute to S. 32 adopted by the Committee on Labor and Public Welfare, which in turn was identical to the one adopted by the Committee on Aeronautical and Space Sciences.

Explanation of Need

Science and technology have become central to Western civilization. Throughout history, science and technology have had occasional, but significant impacts on military capabilities and economic development. However, only recently have we seen the importance of science and technology in dealing with civilian needs. Our military security depends on scientific research and development. Our economic development and productivity, along with our international competitive position, depend on increasing technical innovation to provide new products and services which meet changing needs. And the quality of life in our society—the adequacy of health care, the preservation of the environment, the adequacy of educational programs, the provision of food, housing, transportation and communication services, and the very sources of energy which make other services possible—all are interwoven with, and depend in part on, the efficacy of scientific and technical progress.

Since World War II the principal focus of the Nation's scientific programs has been on defense, and since Sputnik, on space. In these activities, the Federal Government has been the major supporter of research and development. The achievements of the Nation's scientists and engineers in these areas have been sweeping in scope, and staggering in their impact. The development of an overwhelming arsenal of nuclear weapons, ballistic missiles, travel to the Moon and probes to other planets are now commonplace facts to our children.

The application of science and technology to national security needs and space objectives have had some important spin-off effect on the civilian area of our economy and society. Computers, the vast expansion in electronics, and passenger jet aircraft are all derived from military and civilian space R. & D. programs. But many areas of the civilian sector have not yet been significantly affected by scientific research. Textile, shoe, and furniture manufacturing are three examples of civilian industries which are still dependent on traditional methods and which have not reaped the benefits which scientific advance can provide.

And in the public service sector of the economy, the extent to which modern technology has been applied is even less. Trash in our city streets is still collected in the same inefficient manner, and still disposed of in vast rubbish heaps that mar our countryside and pollute our air. Transportation in our metropolitan areas becomes more snarled and inconvenient all the time. And adequate health care for

all our citizens continues to become more costly, even when it is available.

In the civilian sector of our economy and in public services, the vast promise of science and technolgy has not been realized. A principal reason for this is that the Nation has lacked sound national policies and priorities for science and technology.

This has been especially true since 1973 when Reorganization Plan Number 1 abolished the White House Office of Science and Technology. Since that time the President has been without the top-level scientific assistance he needs to deal with the complex technical issues of our time.

Science for most of our citizens is a mysterious code that can only be deciphered by specialists. The policy issues faced by the President involve too many complex technological components for him not to have immediate access to the very best scientific advice our Nation has to offer.

No single scientist can provide such advice. But a first-rate science policy office with a capable staff can rapidly tap the top-flight technical talent throughout our society to provide the President with the best advice possible. This office can also provide a mechanism to anticipate future problems and needs, help coordinate the various Federal research and development activities, and interact with the States concerning their needs related to science and technology.

A White House Science Adivser, (a) with effective relationships with the President, within the Executive Office, and with the various agencies, (b) will access to the technical community, and (c) with adequate resources to do the job, will assure that the President and the Nation will be in a much better position to deal with complex issues involving science and technology.

Conference With the Vice President

The Conference with the Vice President on June 6, 1975, provided valuable perspective in the development of the legislation. The following excerpt from that conference provides useful background in understanding the provisions of the bill as reported by the three Committees (pages 30–31, "Proceedings of the White House Science Advisory Conference, 1975, Special Subcommittee on the National Science Foundation of the Committee on Labor and Public Welfare, July, 1975):

> Senator Kennedy. If I can carry on a little bit further based on what Senator Javits was talking about. Mr. Vice President, do you expect in this annual report that one of the responsibilities of the advisory group would be to indicate what should be the national investment in the areas of science and research, whether we ought to establish some goals in those areas, and perhaps how we ought to be allocating the resources within those goals, so that we will be looking ahead to the allocations of resources in the area of science and technology over the period of, say 5 years?
>
> Is this something you think should be included or would be useful in providing both the country and the Congress, with some guideposts as we consider this whole area?

> Vice President Rockefeller. I would have to say, Senator, I think that is the key to it. I think it is the heart, what you have gone right to. It is the conceptual approach to the role of science and technology in our whole society of life, its future, and our role in the world.
>
> I think that is the heart of it. I think it has got to go further, in a sense. It has to go back—in the report, he has to go back and look at what the high schools are doing, the number of students coming into the field, what colleges are doing, and what has been done by government and by the private sector in these fields, so that, to me, I share completely that thought that this would be basic.
>
> And this report prepared by Dr. Hans Mark is very much in that direction.
>
> These things just do not happen. We have to plan and, as you say, we have to plan ahead of time, if you are going to get there. And we are beginning to fall behind in this whole field.
>
> Senator Javits. That is most alarming.
>
> Senator Kennedy. One of the things that always strikes us in the National Science Foundation Subcommittee is the fact that, as you well know, military R. & D. is not considered within the scope of the Director of the National Science Foundation, who has been serving as the President's science adviser. And I think your comments have been very reassuring in indicating that that military research and development will certainly be within the scope of the science adviser as you see that function.
>
> One of the things which many of us have been interested in is the very large amount of research that is being done for defense and space-related programs.
>
> I do think we have seen, in terms of our competitive prosition in the world, that many of our friends, allies, and competitors in the free world, are devoting a good deal more resources to civilian science and technology, than we are.
>
> Vice President Rockefeller. That is right.
>
> Senator Kennedy. And we, as a country and as a society, ought to recognize that—which I am not sure that we do at the present time—and begin to move the country more in those directions.
>
> Vice President Rockefellr. May I just say on that, that again I agree.

Witnesses Testimony

All of the witnesses who appeared in the hearings strongly supported the re-establishment in the White House of a Science and Technology Advisory Office. The following excerpts from the testimony help clarify the need for, and intent of, various provisions in the bill as reported:

Dr. Philip Handler (President of the National Academy of Sciences):

> A congressional statement of policy (for science and technology) could provide a perspective and sense of purpose

and direction to development of Federal programs and detailed policies. It would guide the many individual decisions that, collectively, determine how wisely and well we are able to realize the potential of science and technology in serving the public good.

Dr. Emanuel R. Piore (Retired Vice President and Chief Scientist, IBM Corporation):

Another function that should be stressed in a very important manner, is that the group or Science Adviser must take an active role in assuring the country the health of scientific and technical institutions, the Government labs, the universities, the nonprofit labs, the scientific and technologic health of our industry. This is not stressed. And I will return to the health of our laboratories in a moment.

Second, I think it is important that the legislation state whether they have a Council or single person, that "he" will be a member of the National Security Council, "he" will be a member of the Domestic Council, and not say "he" will coordinate or develop appropriate working relations. It is very important that a technical person sit when policy is debated, understand whether the policy needs technological backing, whether it is possible to get the technological answer in time to serve the national purpose. There are occasions where action is required based on inadequate knowledge.

Developing appropriate working relationships will not service the purpose. The Security Council may assign the wrong problem or irrelevant problem to the policy, and the same is true of the Domestic Council.

The Office of Science Adviser to the President was most effective when there was a complete open door to Killian, Kistiakowsky, Wiesner to the Security Council. We would never have been able to come up with the policy with regard to arms limitation without that open door. And, thus, I would hope that the language would be changed where it would be mandatory for the President to put these people on the Councils and not just hope that the adviser will have an open door.

It becomes a little more difficult to define the relation between the Science and Technology Council and the Bureau of Management and Budget. It is the Presidential budget and it is not the budget of the Council. And here the annual report can play a very important role. The drafts of the annual report will be seen by the Bureau of the Budget. Debate can take place. Disagreements resolved. This also will provide the best possible coupling with the other agencies. If they know annually that their R. & D. budget will be discussed by the Council or the Adviser and coupled directly to the Bureau of the Budget, there will be no problem of having coordination. I had partial coordinating responsibility for research in the Navy when I was younger. Once the budget is at stake, coordination becomes almost automatic.

This is also related to the annual report which should deal with the current situation. I have observed very important

and well presented documents on the future of various areas of science and technology in our society. Congress files them. To date I have not observed any hearings in Congress on these reports.

Congress ought to be aware when they vote the authorization and the appropriation what are the critical problems in science and technology covered in the executive department submissions. The other type of report is in its own right very important, necessary in that it is vital to understand what the future holds for us.

Therefore, I see the Council having two very fundamental functions. One is to look to the future. The other is to get word to Congress what budgetary items mean, as far as its impact on our daily life. Congress and its staff are well rounded, and thoroughly understanding of all the social issues and implications of various monetary and legislative action. We are trying to get a similar sensitivity in science and technology. That is why I would look to the annual report to address itself to Congress via the President, really pointing out what that budget means to the health of science, to the health of technology, to our foreign policy, and all these other items that science and technology is involved in.

Dr. Eugene B. Skolnikoff (Director of the Center for International Studies and professor of Political Science at Massachusetts Institute of Technology):

Given the fact that this legislation is designed to provide for the long term, I wonder if there should not be a reference to the possibility of creating once again a standing advisory committee for science and technology. This may be more important for an office headed by a single director than for a council of advisers.

. . . There are several parts to this international role. One is the integral relation of science and technology to many issues of foreign policy, or to domestic policy with international implications—it is a cliche to assert that it is increasingly difficult to separate foreign from domestic affairs; but it is also true—a good share of the advisory relationship with the President should and hopefully will be concerned with international issues in which science and technology play an important, sometimes crucial, role.

A second aspect of the international role is policy for international cooperation in science and technology, which is in fact referred to in the House bill. It is an important issue area, but one that to my mind is simply not as significant as are the broader international policy questions.

Third is an aspect often neglected that I believe should be an important concern of a White House science office. I refer to the fact that a substantial share of Federal R. & D. expenditures are motivated in large measure by international considerations (defense, space, some of atomic energy and others). And a good share of the remainder will affect our interna-

tional relations and foreign policy (e.g., energy, agriculture, geophysics) when the R. & D. comes to fruition. And, hardest of all to define, many R. & D. projects are not being done at all that could affect the world and our policies favorably.

Dr. James R. Killian, Jr. (author of the National Academy of Sciences "Report on Science and Technology in Presidential Policy-making"):

I have suggested the importance of the advisory mechanism's being closely related to other agencies in the Executive Office of the President. It would be my judgment that the head of this advisory mechanism should be a member of the Domestic Council and he should be, if not a member of the National Security Council, closely related to its work.

I found in a number of experiences when I was Science Adviser to the President, being present at a meeting of the National Security Council enabled me at that time to point out to the President certain policy questions that were under consideration where there was a component involving science and technology that would not be normally recognized. I found that to be, and I think the President found that to be a important way in which the Science Adviser could operate.

The advisory mechanism, working with the National Security Council and the Department of State, should also be able to contribute to those areas of foreign policy strongly affected by scientific and technological considerations. And finally, the advisory mechanism should cooperate closely with the Office of Management and Budget on significant budget and management issues involving science and technology.

. . . I do also feel that there should be an annual report of a very special kind prepared by the mechanism created in the White House. I know that it is difficult to contemplate any kind of comprehensive report on the state of science in the country. That is not what I am talking about. And that is not what the NAS Committee recommended.

Rather, it was urging that there be an opportunity for this Science Adviser in the White House annually to submit to the President or to the Congress a statement of what he thinks are some of the acute and current problems that they should be aware of and to give attention to. And what are some of the budgetary problems that we face and problems of technology assessment.

. . . I think, for example, of the importance of a reordering of priorities which will enable our Government to generate and encourage new technologies which can contribute to the strength of our economy. Prof. Robert Gilpin of Princeton, an economist, in his report for the use of the Joint Economic Committee of the Congress, has presented an eloquent argument for rejuvenating our technological vitality through thoughtful changes in the Nation's priorities in research and development funding. He has argued persuasively that priorities have been "too much set by the cold war and a drive for national prestige."

I share that kind of comment; and I think we have a pressing opportunity to deal with this aspect of the Government's policies as related to science and technology.

Next, the whole domain of national security, and I include in national security arms limitation, can benefit from objective scientific advice formulated at the level of the Presidency and outside of the Department of Defense and the Department of State.

I am deeply disturbed by the amount of complacency in our country today in regard to the hazards involved in the arms race and in the proliferation of nuclear weapons. Scientists and engineers have an essential role to play in the formulation of policies with respect to the control of nuclear weapons. I find deeply disturbing recent suggestions that we might find it desirable to use nuclear tactical weapons and that a nuclear exchange could in any way be handled in an acceptable way.

. . . More stress, particularly in dealing with a relationship with the National Security Council, would be useful because I think if I were to have a general criticism of the House bill, it would be that it is somewhat bland with respect to the relationship of the proposed science adviser and his associates with the Domestic Council and with the National Security Council.

And I think it is particularly important that the bill make clear that Congress expects a working relationship between those agencies as well as the OMB, or else this advisory mechanism can become isolated and is futile.

So that is a very important point.

We have had periods recently where I think this relationship with the National Security Council has become inoperative and ineffective in terms of the science advisory arrangement that then existed.

Dr. Roger Revelle (Chairman of the Board, American Association for the Advancement of Science):

In the "Statement of Findings and Declaration of Policy," of S. 32, Federal funding for science and technology is referred to as an investment in the future which must be a "continuing investment" because it is "indispensable to sustained national progress."

The same idea is expressed differently in that "the manpower pool of scientists and engineers constitutes an invaluable national resource which should be utilized to the maximum extent possible at all times."

This view of Federal funding for science and technology as an investment instead of simply a component of current operating expenditures recognizes both the necessity of maintaining as much stability as possible in our national research effort and the hard truth that the benefits of research, though very great, will almost never be short-term ones.

I do not want to imply that the budget for research and development should be sacred and unchanged from year to year.

Much short-term development work can be postponed or put on the shelf when warranted by economic conditions. But long-term research and education which produce the intellectual capital for the future are investments that should be protected and sustained.

. . . The difficulty could be resolved if the Council of Advisers or the Office of Science and Technology had responsibility for recommending a long-term—say 5 years—investment program for science and technology, subject to the year-to-year fluctuations imposed by economic exigencies as reflected in the budget prepared by the Office of Management and Budget.

The preparation of an investment program for science and technology would give genuine substance to the planning function envisioned in both H.R. 10230 and S. 32.

. . . A statement in the bill passed by Congress emphasizing that the scope of the Science Adviser's responsibilities should include the scientific and technological aspects of policies for national security and international relations and oversight of programs supporting these policies could be useful.

Dr. Thomas G. Fox (Science Adviser to the Governor of Pennsylvania):

I think the key factor is that these bills provide at the Federal level the kind of input from State and local government we need. I refer to provisions like the one in S. 32 to provide an Intergovernmental Policy Council and to provide to the States some financial support from the Federal level to implement this program. If such provisions would be instituted, we indeed could move ahead very far and rapidly in establishing intergovernmental partnerships in managing the use of technology that are absolutely required.

. . . There are many States that are deeply into this with 10 years of positive experience. And there are a number of States that have studied what to do. For example, here is an excellent study by Puerto Rico on what they need to do, one by the State of California and one by Hawaii. I would say there are at least 20 or 30 States that have had good experience or have comprehensive and sophisticated studies of this question. I think we should move ahead and not wait.

Mr. Arthur P. Stern (President of the Institute of Electrical and Electronic Engineers):

. . . while it would be wrong to force on the President anything that he does not readily accept, it seems to me difficult to imagine that a science and technology policy adviser could be effective unless he sits on the Domestic Council and on the National Security Council, and unless he has a great say in

international matters, because all these areas are permeated today by science and technology considerations—or they should be, if they are not—and science and technology are either there in the foreground, or certainly should be there in the background, of almost any important policy decision.

. . . Next, in comparing S. 32 with H.R. 10230, we found numerous diferences. One of them was particularly striking.

S. 32 mentions that "the pool of scientists and engineers is an invaluable national resource." It goes on at another point to state that "scientists and engineers must have continuing opportunities for socially useful employment in positions commensurate with their professional and technical capabilities."

H.R. 10230 does not do any of this. Not only it doesn't do that, but a reference which was in the original text of H.R. 8058 and which was directed toward insuring the "full utilization of the technical manpower" of this country was stricken from the final text.

We feel that it is inconceivable to make a major step toward recognizing science and technology and its central role in this country without looking out for the practitioners of science and technology. It is vital for this country, so that we maintain the leadership of which I talked before, that we attract the brightest, that we teach them well, that we give them appropriate rewards, and that we insure that they age in dignity.

It is also important, in order to be able to do a good job in this area, that we establish an adequate data base to know where we stand and where we go with our scientific and engineering manpower.

. . . If the Science Adviser has no substantial influence on the budget process, then he becomes the decoration that I referred to before.

The general intent of the Federal Government in science and technology is well and nice, but what really matters is what is getting done, and that which is being done is expressed in one way only—besides speeches—and that is money that is being spent.

So I think the answer to that question must be strongly affirmative. The Science Adviser must have a role in budget preparation or else he will not be effective.

Agency Comments

Comments on S. 32, S. 1987, or H.R. 10230 were requested by the Committee on Labor and Public Welfare, the Committee on Commerce, or the Committee on Aeronautical and Space Sciences from a number of agencies, including: Department of Health, Education, and Welfare; National Science Foundation, National Aeronautics and Space Administration; Energy Research and Development Administration; Environmental Protection Agency; Council of Economic Advisers; Council on Environmental Quality; Office of Management and

GERALD R. FORD LIBRARY

Budget; and General Accounting Office. The following comments were received in response to those requests:

THE CHAIRMAN OF THE
COUNCIL OF ECONOMIC ADVISERS,
Washington, March 11, 1975.

Hon. HARRISON A. WILLIAMS, Jr.,
U.S. Senate,
Committee on Labor and Public Welfare,
Washington, D.C.

DEAR SENATOR WILLIAMS: This is in response to your request for the views of the Council of Economic Advisers on S. 32, the proposed "National Policy and Priorities for Science and Technology Act of 1975."

It is important that science and technology make as free a contribution to public policy formulation as possible. Many important and serious problems cannot be solved efficiently without an adequate understanding of the scientific and technological parameters that they entail. The proposed bill, however, would attempt to facilitate the contribution of the scientific community to the public policy-making process in an inefficient and contradictory manner.

The Council of Advisers on Science and Technology is assigned the task of providing confidential policy advice to the President on public policy issues that involve scientific and technological considerations. Yet, simultaneously, the Act directs this same Council, after consulting with the Council of Economic Advisers about the "state of the economy," to publicly recommend to both the President and the Congress priorities and funding levels to guide Federal expenditures for scientific and technological research and development—independently of the normal process of formulating the President's budget. Then in each of those instances that the President's *Budget* differs from its own recommendation the Council is directed to append to its annual *Science and Technology Report* the justification for its own recommendation along with the President's reason for rejecting them. Although I am puzzled about the reasons for proposing this procedure, I am quite certain it would not result in a greater contribution by the scientific community to the public policy process. At best, either the proposed Council's role as the President's scientific counselor or the Council's role as the President's public critic would be served poorly.

The bill would also assign to the Council many functions that are new performed by the Office of Management and Budget. These functions are part of a comprehensive budgeting process. The existence of an independent Council within the Executive Office of the President might enable a President to evaluate how well OMB was performing these functions but, they would have to continue to be performed within OMB even if S. 32 were to be enacted. Thus these provisions of the bill would create an unnecessary, and perhaps even counter-productive, duplication of effort.

The bill also would direct the Director of the National Science Foundation to give two-year starter grants to each state that wished to organize an "Office of State Science and Technology." Neither the necessity nor rationale for such grants are apparent. NSF could make

such grants now, perhaps on a demonstration basis, if it considered such grants to be a prudent use of their funds. I would assume that their failure to do so implies that they believe that alternative uses of their funds will enable the scientific and technical community to make a more significant contribution to the public interest.

In summary I do not believe that S. 32 would be an efficient method of enhancing the Federal Government's ability to utilize the resources of the scientific and technical community to solve economic and social problems. The Office of Management and Budget has advised me that this report is consistent with the President's program.

Sincerely,

ALAN GREENSPAN.

COMPTROLLER GENERAL OF THE UNITED STATES.
Washington, D.C., May 5, 1975.

B–58911

Hon. HARRISON A. WILLIAMS, Jr.,
Chairman, Committee on Labor and Public Welfare,
U.S. Senate

DEAR MR. CHAIRMAN: Reference is made to your communication of January 24, 1975, requesting our comments on S. 32, 94th Congress. The would establish a framework for the formulation of national policy and priorities for science and technology and, if enacted, would be cited as the "National Policy and Priorities for Science and Technology Act of 1975."

This measure would change the existing Federal science policy apparatus. It creates a framework and technology which are very similar to that of the former Office of Science and Technology. It would create a Council of Advisors on Science and Technology in the Executive Office who would advise the President on major policy, plans, and programs of science and technology of the Federal Government. As part of this framework, it also creates a Federal Coordinating Committee for Science and Technology with various responsibilities related to problems and developments in the fields of science and technology and related activities affecting more than one Federal agency.

Under the present the Director, National Science Foundation, acts as both Director of the Foundation and as the President's Science Advisor. The Director also chairs the Federal Council on Science and Technology which would be abolished by the bill.

A proposal to change the national science advisory mechanism is a national issue with great impact. The Comptroller General previously discussed the Federal Organization for Science and Technology including some of the changes that are proposed in S. 32 in his testimony before the House Committee on Science and Astronautics on July 9, 1974. A copy of this testimony is enclosed.

Many of the policy statements included in section 2, and the specific purpose of the act, stated in item (c) on page 4, indicate a strong emphasis on the application of science and technology to the furtherance of national goals. However, titles I, II, and III deal primarily with the Presidential advisory function, planning, strategy and priorities for Federal investments in science and technology, and Federal oversight and coordination. Title IV provides for a limited co-

ordinating network with the "standard regions" representing State and local government interests and needs.

Although the Federal Government sponsors the major portion of the public investment in research and development, the ultimate application and utilization of science and technology for civilian needs requires implementation by States and local governments, with help from the private sector. This involves a very complex process to overcome the barriers and provide the necessary incentives for technological innovation. The bill does not appear to be fully developed with respect to establishing improved mechanisms for delivery of technology into the public and private domain. Its primary emphasis is concerned with the generation of technological options resulting from research.

We suggest, therefore, that the intergovernmental advisory program proposed in title IV be examined in the light of experience gained from various civil agency programs, including the R&D Assessment Program and the Intergovernmental Science Program sponsored by the National Science Foundation through the last several years. In these programs a number of studies, experiments and demonstration efforts have been performed to identify institutional relationships between and among Federal, State, and local governments, and the private sector, and to catalyze efforts to stimulate technology innovation and the transfer and utilization of technology.

In title I, section 102(a) the Council is directed to perform an annual appraisal of progress in science and technology in relation to national needs, taking into account the state of the economy through consultation with the Council of Economic Advisors, and to determine the desired level of Federal investment in science and technology for the next succeeding fiscal year. We believe that in performing this appraisal and determining the desired level of Federal investment other factors besides the economy should also be considered. We therefore suggest that the wording of this section be revised to include consultation with the National Security Council, the Domestic Council and the Council on Environmental Quality.

As a step toward identifying means for strengthening the delivery mechanisms for the application and utilization of science and technology we suggest that consideration be given to expanding the scope of the study described in title I, section 107 for assignment to the National Academy of Sciences. In addition to examining Federal organization for science and technology, the study might include an examination of the institutional relationships between the Federal, State and local governments, and other factors that affect the innovative process, especially with respect to the improvement of public services.

Section 201(b), title II, provides for the membership of the Federal Coordinating Committee for Science and Technology. Included in the prescribed membership is a representative of the Atomic Energy Commission and the Energy Research and Development Administration. The Atomic Energy Commission was abolished by section 104(a), title I, of the Energy Reorganization Act of 1974, Pub. L. No. 93–438 approved October 11, 1974. The Act split the responsibilities of the former Atomic Energy Commission. Responsibilities relating to the research and development of nuclear energy were transferred to

the Energy Research and Development Administration. Licensing and related regulatory responsibilities were transferred to an independent commission—the Nuclear Regulatory Commission. Since the prescribed membership includes a representative of the Energy Research and Development Administration, the Committee may wish to consider deleting the Atomic Energy Commission as a member and substituting the Nuclear Regulatory Commission.

Section 301, title III would amend section 3(d) of the National Science Foundation Act of 1950 to read "The foundation shall recommend and encourage the pursuit of national policies designed to foster *research* and education in science and engineering, and the application of scientific and technical knowledge to the solution of national problems." (Underscoring supplied.)

Section 3(d) now reads "The Board and the Director shall recommend and encourage the pursuit of national policies for the promotion of *basic research* and education in the sciences." (Italic supplied.) The proposed amendment would therefore substitute "research" for "basic research."

As stated in section 3(a)(1) of the National Science Foundation Act of 1950, as amended, one of the primary functions of the Foundation is to "* * * initiate and support basic scientific research and programs to strengthen scientific research potential and science education programs at all levels in the mathematical, physical, medical, biological, engineering, social, and other sciences, * * *." Section 3(c) provides the Foundation with authority to initiate and support applied research.

Over the years the scientific community and the Congress have expressed concern that the Foundation would lessen its emphasis on basic research by providing increased support for applied research. The Foundation recently stated that of its proposed fiscal year 1976 budget dealing directly with research, about 83 percent is earmarked for basic research. The remaining 17 percent of the research budget is aimed at applied research areas focusing primarily on major national problems.

The Committee may wish to revise the wording of the proposed amendment of section 3(d) to identify the emphasis the Foundation should place on basic research and applied research.

Section 304(d)(2), title III provides that the National Science Foundation shall allocate fellowships under this subsection in such manner, insofar as practicable, as will—

(A) attract highly qualified applicants; and

now is the time for all good men to come to the aid of their country

(B) provide an equitable distribution of such fellowships throughout the United States.

The Committee may wish to include a provision that the Foundation should also consider the scientific manpower needs in awarding continuing education fellowships to assure that the most needed types of scientific manpower receive financial aid in updating their skills.

Sections 105(3), title I, and 403(a), title IV, contain authority for the Chairman of the Council and the Charman of the Intergovernmental Science and Technology Advisory Committee to appoint and fix the compensation of certain personnel without regard to the provisions of title 5, United States Code. We are not aware of the need

to exempt such personnel from these provisions. Generally, it should be possible to obtain qualified personnel within the structure of the General Schedule.

Section 404(a) authorizes grants of up to $100,000 to any State to pay a part of the cost of establishing an Office of State Science and Technology. Further, Section 404(b)(2) provides that a State receiving such grant funds will, after two years, assume the cost of operating such an organization. This methodology for encouraging the establishment and maintenance of a program or organization is quite common, often referred to as "seed-money" grants. However, it is also common practice when using this method of financing to require the recipient not only to assume the cost of a previously supported activity, but also to maintain a reasonably consistent level of effort. The maintenance of effort requirement is not contained in the subject bill, nor does the bill stipulate how large a "part of the cost" the grant may constitute.

To illustrate the effect of these provisions, the following example is offered. A State could establish an organization costing $200,000 annually—$100,000 provided by National Science Foundation and $100,000 provided by the State. After two years, Federal assistance would end and the State, required to assume the cost of operating the organization, could decide to fund it at a level of $100,000. Thus, the State would be complying with the bill, but would also be reducing considerably the total level of effort. There is nothing inherently wrong with permitting such consequences to occur, but the issue is whether the Congress desires to proceed in this fashion.

Further, the bill contains no penalties or other sanctions to be applied in the event a State fails to assume the cost of an organization as required by section 404(b)(2).

We note that the bill does not specifically provide for an evaluation of the program. It is our view that program evaluation is a fundamental part of effective program administration and that the responsibility for evaluations should rest initially upon the responsible agency. In line with this concept, we believe the Congress should attempt to specify the kinds of information and tests which will enable it to better assess how well programs are working and whether alternative approaches may offer greater promise. We will be happy to work with the Committee in developing specific language if you wish.

Also, the bill does not provide for access by the General Accounting Office to the records of recipients of assistance thereunder for purposes of audit and examination. While section 202 of the Intergovernmental Cooperation Act of 1968, Pub. L. No. 90–577, October 16, 1968, 82 Stat. 1101, 42 U.S.C. § 4212, would provide such authority with regard to the grants to States authorized by section 404 of the bill, it would not apply to the contracts or arrangements which sections 101(c) and 107 authorize the Council of Advisers on Science and Technology to enter into, or to the grants or contracts which section 304(c) authorizes the National Science Foundation to make or enter into. We recommend that such a provision be added to the bill. This could be accomplished by adding a new section 503 to the bill as follows:

"SEC. (a) Each recipient of Federal assistance under this Act, pursuant to grants, subgrants, contracts, subcontracts, loans or other arrangements, entered into under other than by formal advertising, and which are otherwise authorized by this Act, shall keep such records as the Council or the Foundation shall prescribe, including records which fully disclose the amount and disposition by such recipient of the proceeds of such assistance, the total cost of the project or undertaking in connection with which such assistance is given or used, the amount of that portion of the cost of the project or undertaking supplied by other sources, and such ther records as will facilitate as effective audit.

"(b) The Council and the Foundation and the Comptroller General of the United States, or any of their duly authorized representatives, shall, until the expiration of three years after completion of the project or undertaking referred to in subsection (a) of this section, have access for the purpose of audit and examination to any books, documents, papers and records of such recipients which in the opinion of the Council or the Foundation or the Comptroller General may be related or pertinent to the grants, contracts, subcontracts, subgrants, loans or other arrangements referred to in subsection (a)."

Enclosed are several suggested editorial changes to the bill.

Sincerely yours,

ELMER B. STAATS,
Comptroller General
of the United States.

Enclosures.

SUGGESTED TECHNICAL AND EDITORIAL CHANGES TO S. 32

(1) Page 1, line 6, sec. 2(2) should be sec. 2(a).

(2) Page 4, line 23, and page 15, the title of the Committee should be consistent in the bill (page 4 has "Interagency" in the title, page 15 does not).

(3) Page 15, line 18, Agency in Energy Research and Development Agency should be Administration.

(4) Page 18, line 7, foundation should be Foundation.

(5) Page 22, line 24 Cities/United States should be Cities, United States.

ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION,
Washington, D.C. September 4, 1975.

Hon. WARREN G. MAGNUSON,
Chairman, Committee on Commerce,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: This is in response to your letter of July 1, 1975, requesting the comments of the Energy Research and Development Administration on S. 1987, the "Presidential Science and Technology Advisory Organization Act of 1975." This bill would establish in the Executive Office of the President the Office of Science and Technology Policy for the purpose of providing advice and assistance to the President with respect to scientific and technological considerations affecting national policies and programs.

The Energy Research and Development Administration strongly supports enactment of S. 1987. Since 1973 the functions of a Presidential Science Adviser have been placed under the Director of the

National Science Foundation. The Energy Research and Development Administration endorses the concept of a science and technology presence which responds to and serves the President's needs. S. 1987 strengthens this concept by making the position of Science Adviser a full-time undertaking.

The Office of Management and Budget has advised us that there is no objection to the presentation of this report, and enactment of S. 1987 would be in accordance with the program of the President.

Sincerely,

R. TENNEY JOHNSON,
General Counsel.

NATIONAL SCIENCE FOUNDATION,
OFFICE OF THE DIRECTOR,
Washington, D.C., August 28, 1975.

Hon. WARREN G. MAGNUSON,
Chairman, Committee on Commerce, U.S. Senate,
Washington, D.C.

DEAR MR. CHAIRMAN: This is in response to your letter of July 1, 1975, requesting the comments of the National Science Foundation on S. 1987, the "Presidential Science and Technology Advisory Organization Act of 1975."

The Foundation strongly supports enactment of S. 1987. As you know, the proposed legislation is the result of a decision by President Ford to establish a new Office of Science and Technology Policy in the Executive Office of the President in order to continue and strengthen the role of science and technology in his Administration. In his letters of June 9, 1975 to the Speaker and the Vice President transmitting the proposed legislation, the President noted the vital contribution of science and technology to the continued progress of the nation. He expressed his intent that the Director of the new Office provide advice to him and his top assistants in policy areas where scientific or technological considerations were involved. The President also expressed his intent to appoint the Director as his Science and Technology Adviser and as the Chairman of the Federal Council on Science and Technology.

I fully agree with the President's actions in this matter. I believe that these decisions, as expressed in the President's letter on June 9, 1975, and as reflected in the provisions of S. 1987, will bring science and technology into a colser and more effective relationship to Federal policy matters and the operation of Federal programs. Critical to such a process is provision for advice and counsel to the President and top level staff on the scientific and technological aspects of policy questions. I have consistently supported the concept of a science and technology presence which responds to and serves the President's needs. S. 1987 will do this by establishing within the Executive Office of the President a new Office at a level commensurate with the important functions assigned to the Director as the President's chief policy adviser with respect to scientific and technological matters (Sections 3 and 4 of the bill). The Office established by the bill will create a compact but highly competent professional taff within the White House (Section 5) with authority provided by Section 6 and 7 to tap not only outside expert consultant and other services, but also the capability of

the other Federal agencies, which possess great scientific and technological resources.

The Foundation urges the prompt consideration of S. 1987 by the Congress and its swift enactment.

The Office of Management and Budget has advised us that there is no objection to the submission of this report, and that enactment of S. 1987 would be in accord with the program of the President.

Sincerely yours,

H. GUYFORD STEVER,
Director.

NATIONAL SCIENCE FOUNDATION,
Washington, D.C., November 25, 1975.

Hon. FRANK E. MOSS,
Chairman, Committee on Aeronautical and Space Sciences,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: Thank you for the opportunity extended to me at the hearing to comment or suggest any improvements that should be made in H.R. 10230, the Science and Technology Policy Act recently passed by the House of Representatives. The bill has been reviewed very carefully within the Administration. While we could conceivably suggest a few minor perfecting changes in the bill, I do not believe any changes are sufficiently important to warrant a delay in the passage of the bill.

As the President has indicated, H.R. 10230 is acceptable to the Administration and we recommend its passage by the Senate at the earliest practicable date.

Sincerely yours,

H. GUYFORD STEVER,
Science Adviser.

COST ESTIMATES

In accordance with section 252(a) of the Legislative Reorganization Act of 1970, the Committees estimate that costs which would be received in carrying out this bill for fiscal year 1976, the period from July 1, 1976 through September 30, 1976, and fiscal year 1977, would be as follows:

Fiscal year 1976:	
Title II	$1,000,000
Title III	1,000,000
Title V	2,000,000
Total	4,000,000
July 1–September 30, 1976:	
Title II	250,000
Title III	250,000
Title V	1,000,000
Total	1,500,000
Fiscal year 1977:	
Title II	3,000,000
Title III	1,000,000
Title V	8,000,000
Total	12,000,000

Tabulation of Votes Cast in Committee

Pursuant to section 133 (b) of the Legislative Reorganization Act of 1946, as amended, the following is the tabulation of votes on S. 32 in the three committees:

The Committee on Aeronautical and Space Sciences, without objection, ordered the bill, as amended, reported favorably.

The Committee on Commerce, without objection, ordered the bill, as amended, reported favorably.

The Committee on Labor and Public Welfare unanimously ordered the bill, as amended, reported favorably.

Changes in Existing Law

In compliance with subsection (4) of rule XXIX of the Standing Rules of the Senate, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman):

Reorganization Plan No. 2 of 1962

Prepared by the President and transmitted to the Senate and the House of Representatives in Congress assembled, March 29, 1962, pursuant to the provisions of the Reorganization Act of 1949, 63 Stat. 203, as amended.

Certain Science Agencies and Functions

part i—office of science and technology

[Section 1. Office of Science and Technology. There is hereby established in the Executive Office of the President the Office of Science and Technology, hereafter in this Part referred to as the Office.

[Sec. 2. Director and deputy. (a) There shall be at the head of the Office the Director of the Office of Science and Technology, hereafter in this Part referred to as the Director. The Director shall be appointed by the President by and with the advice and consent of the Senate and shall receive compensation at the rate of $22,500 per annum.

[(b) There shall be in the Office a Deputy Director of the Office of Science and Technology, who shall be appointed by the President by and with the advice and consent of the Senate and receive compensation at the rate of $20,500 per annum. The Deputy Director shall perform such functions as the Director may from time to time prescribe and shall act as Director during the absence or disability of the Director or in the event of vacancy in the office of Director.

[(c) No person shall while holding office as Director or Deputy Director engage in any other business, vocation, or employment.

[Sec. 3. Transfer and performance of functions. (a) There are hereby transferred from the National Science Foundation to the Director:

[(1) So much of the functions conferred upon the Foundation by the provisions of section 3(a)(1) of the National Science Foundation Act of 1950 (42 U.S.C. 1862(a)(1)) as will enable the Director to advise and assist the President in achieving coordinated Federal policies for the promotion of basic research and education in the sciences.

[(2) The functions conferred upon the Foundation by that part of section 3(a)(6) of the National Science Foundation Act of 1950 (42 U.S.C. 1862(a)(6)) which reads as follows: "to evaluate scientific research programs undertaken by agencies of the Federal Government."

[(b) In carrying out the functions transferred by the provisions of section 3(a) of this reorganization plan, the Director shall assist the President as he may request with respect to the coordination of Federal scientific and technological functions and agencies.

[(c) The Director may from time to time make such provisions as he deems appropriate authorizing the performance of any of his functions by any other officer, or by any employee or agency, of the Office.

[Sec. 4. Personnel. The Director may appoint employees necessary for the work of the Office under the classified civil service and fix their compensation in accordance with the classification laws.]

* * * * * * *

Section 2 of Reorganization Plan No. 1 of 1973

[Sec. 2. Transfer of functions to the Director, National Science Foundation.—There are hereby transferred to the Director of the National Science Foundation all functions vested by law in the Office of Science and Technology or the Director or Deputy Director of the Office of Science and Technology.]

○

United States of America

Congressional Record

PROCEEDINGS AND DEBATES OF THE 94th CONGRESS, SECOND SESSION

Vol. 122 WASHINGTON, WEDNESDAY, FEBRUARY 4, 1976 No. 13

Senate

NATIONAL POLICY, ORGANIZATION, AND PRIORITIES FOR SCIENCE, ENGINEERING, AND TECHNOLOGY ACT OF 1976

Mr. KENNEDY. Mr. President, I rise in support of S. 32, the National Policy Organization, and Priorities for Science, Engineering and Technology Act of 1976.

This bill would provide the President with scientific expertise in dealing with the complex problems of modern society. Under the bill, the Science Adviser to the President would be an active member of the President's top team of advisers. He would be a member of the Domestic Council, a statutory Adviser to the National Security Council, and an active participant in the development of the Administration budget with respect to R. &. D.

He would develop 5-year forecasts of the Nation's R. & D. programs. Each year he would assess current developments in science and technology, relate them to national needs and his 5-year forecasts, and prepare a set of budget and priority options with respect to research and development for OMB to use in the development of the overall budget.

In addition, of course, the Science Adviser would continually be on call to provide the President with expert advice on science and technology policy matters.

As approved by the three committees, the bill establishes a White House Office of Science, Engineering, and Technology Policy, with a Director and up to four Associate Directors appointed by the President with the advice and consent of the Senate. The Director will be at the same salary level as the OMB Director, $44,600.

The bill also establishes a President's Advisory Committee on Science, Engineering, and Technology to do a comprehensvie survey of Federal organization for science and technology. In addition, the bill creates a grant program to provide seed money of up to $200,000 for each of the 50 States, so that they can establish science and technology advisory offices at the State level.

I am pleased that the bill as approved stipulates that the Director of the Science Advisory Office also serve as a member of the Domestic Council and as a statutory advisor to the National Security Council; and that the bill requires the Director to work closely with OMB in the development of the Federal budget for research and development.

These provisions will assure that the Science Director will be a full-fledged member of the President's top team of advisors, in domestic, international, and national security affairs.

The State and regional science and technology program will help the States in utilizing the full potential of science and technology to meet their own problems in economic development, energy, pollution control, transportation, and other areas involving science and technology.

The policy section of the bill sets a framework for the formulation of national policy and priorities in science and technology, stating that: First, there must be a continuing investment in science and technology directed toward the priority needs of the nation; second, the

technical manpower pool is an invaluable national resource that should be fully utilized; and third, capabilities for technology assessment, planning, and policy formulation must be strengthened at both Federal and State levels." The bill authorizes $4,000,000 for the balance of the current fiscal year; $1,500,000 for the 3-month period from July 1 through September 30, 1976; and $12,000,000 for fiscal year 1977."

Mr. President, this bill is a revision of earlier bills of mine which passed the Senate in two previous Congresses. Since I re-introduced this bill in January 1975 it has been considered extensively by the Labor, Commerce, and Space Committees. Yesterday I filed the joint report on behalf of the three committees, which provides the detailed explanation of the bill.

I ask unanimous consent that excerpts from the committee report be printed in the RECORD.

I also have an exchange of correspondence between myself and the Vice President, and between myself and Senator CHURCH, which is highly relevant to this consideration, and I ask unanimous consent that these letters be printed in the RECORD at this point.

Mr. President, this bill would provide the nation with a means to establish sound national policies and priorities for science and technology. I urge all Senators to support this measure.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

[Excerpts from committees' joint report on S. 32]

SUMMARY OF BILL

General

This Act establishes a framework for the formulation of national policy and priorities for science and technology, including the establishment of an Office of Science, Engineering, and Technology Policy in the Executive Office of the President.

TITLE I

Declaration of policy

Title I establishes as national policy that: (a) there must be a continuing investment in science and technology directed toward the priority needs of the nation; (b) the technical manpower pool is an invaluable national resource that should be fully utilized; and (c) capabilities for technology assessment, planning, and policy formulation must be strengthened at both Federal and State levels. Title I also sets forth fifteen priority areas for allocation of the Federal investment in science and technology.

TITLE II

Office of Science, Engineering, and Technology Policy

Title II establishes an Office of Science, Engineering, and Technology Policy in the Executive Office of the President, administered by a Director (at Level II of the Executive Schedule), appointed by and with the advice and consent of the Senate. The President is authorized to appoint up to four Associate Directors (at Level III of the Executive Schedule), also with Senate confirmation.

The Office shall: prepare and annually update a five-year forecast of Federal investment in science and technology, including estimates of the allocation of Federal funds among major expenditure areas; annually estimate a range of options for various levels of Federal investment in science and technology, including a range of priority options for allocating Federal funds among major expenditure areas; and furnish the options to the Office of Management and Budget for use in developing budget recommendations to the President.

The Office shall provide the President with a continuing source of policy planning, analysis, and advice with respect to major policies, plans, and programs of science and technology of the Federal government.

The Director of the Office shall chair the Federal Coordinating Group for Science, Engineering, and Technology (established under Title IV) and the Intergovernmental Science, Engineering, and Technology Advisory Panel (established under Title V); shall serve as a member of the Domestic Council; and as an adviser to the National Security Council. The Director shall coordinate the work of the Office with the Domestic Council, NSC, CEQ, CEA, OMB, and the departments and agencies.

The Office shall prepare an annual Report on Science, Engineering, and Technology which the President shall transmit to the Congress.

TITLE III

President's Advisory Committee on Science, Engineering, and Technology

Under Title III, the President shall appoint an Advisory Committee of between 9 and 15 members, including the Director of the Office. The Committee shall conduct a comprehensive survey of Federal science and technology, and submit a report thereon to

the President within one year. After receipt of the report, the Committee shall expire unless the President deems it advantageous to continue the Committee as an ongoing Advisory Committee.

TITLE IV

Federal coordination group for science, engineering, and technology

Title IV redesignates the Federal Council for Science and Technology as the Federal Coordinating Committee for Science, Engineering, and Technology, and gives it the statutory authority to coordinate Federal plans and programs in science and technology. The Director of the Office is designated as Chairman of this Group.

TITLE V

State and region science, engineering, and technology program

Title V establishes an Intergovernmental Science, Engineering, and Technology Advisory Panel to advise the Director in establishing priorities for addressing civilian problems at State, regional and local levels which science and technology can help resolve. This title also establishes a State Science, Engineering, and Technology Program within the National Science Foundation to make grants of up to $200,000 to any State to enable it to establish or strengthen Offices of Science, Engineering, and Technology within the executive or legislative branches of State governments, provided that the State provides matching funding on an 80% Federal, 20% State basis.

TITLE VI

Authorization of appropriations

Title VI authorizes $4,000,000 for fiscal year 1976; $1,500,000 for the period from July 1 through September 30, 1976; and $12,000,000 for fiscal year 1977.

SECTION-BY-SECTION ANALYSIS

TITLE I—NATIONAL SCIENCE, ENGINEERING, AND TECHNOLOGY POLICY AND PRIORITIES

Findings

Section 101. This section states the findings of Congress that: Federal funding for science and technology is an investment in the nation's future; the technical manpower pool is an invaluable national resource which should be fully utilized; strong participation by State and local governments is essential; diversified technical capabilities in government, industry, and the universities are essential; and a systematic approach is needed, including long-range planning, as well as intermediate and short-range program development.

Declaration of policies and priorities

Section 102. This section declares it to be national policy that: there be a continuing investment in science and technology adequate to national needs; that the Federal Government must promote the utilization in the national interest of the Nation's human resources in science, engineering, and technology; capabilities for technology assessment, planning, and policy formulation must be strengthened of both Federal and State levels; the Federal investment in science and technology must be addressed to the priority needs of the Nation, including (a) national strength in research and education, (b) dissemination of technical knowledge, (c) utilizing science and technology in support of national goals, (d) promoting conservation and efficient utilization of natural and human resources, (e) protecting the oceans and coastal zones, (f) strengthening the economy and promoting full employment, (g) assuring adequate supplies of food, materials, and energy, (h) strengthening national security, (i) improving the quality of health care, (j) improving transportation and communication services, (k) increasing educational opportunities, (l) assuring effective public services, (m) developing high-quality, low-cost housing, (n) eliminating air and water pollution and unhealthful drugs and food additives, and (o) enhancing environmental quality.

Declaration of purpose

Section 103. This section declares the purpose of this Act to: (1) establish an Office of Science, Engineering, and Technology Policy in the Executive Office of the President; (2) establish a State and Regional Science, Enginering, and Technology Program; (3) establish an Interagency Federal Coordinating Group on Science, Engineering, and Technology; and (4) require the President to submit an annual Science, Engineering, and Technology Report to Congress.

TITLE II—OFFICE OF SCIENCE, ENGINEERING, AND TECHNOLOGY POLICY

Establishment

Section 201. This section establishes an Office of Science, Engineering, and Technology Policy in the Executive Office of the President.

Director

Section 202. This section states that the Office shall be administered by a Director, appointed by President with the advice and consent of the Senate and compensated at the rate provided for level II of the Executive Schedule.

Associate directors

Section 203. This section authorizes the President to appoint with the advice and consent of the Senate, up to four Associate

Directors, compensated at a rate not to exceed level III of the Executive Schedule.

Federal investment and priorities

Section 204. This section states that the Office shall: prepare and annually update a five-year forecast of Federal investment in science, and technology, including estimates of the allocation of Federal funds among major expenditure areas; annually estimate a range of options for various levels of Federal investment in science and technology, including a range of priority options for allocating Federal funds among major expenditure areas; and furnish the options to the Office of Management and Budget for use in developing budget recommendations to the President.

Policy planning, analysis, and advice

Section 205. This section states that the Office shall serve as a source of scientific, engineering, and technological analysis and judgment for the President with respect to major policies, plans, and programs of the Federal Government.

Additional functions of the director

Section 206. This section states that the Director shall serve as Chairman of the Federal Coordinating Group for Science, Engineering, and Technology, as a member of the Domestic Council, as a member of the Intergovernmental Science, Engineering, and Technology Advisory Panel, and as a Statutory Adviser to the National Security Council in such matters concerning science, engineering, and technology as relate to national security; and that the Director is authorized to appoint and compensate personnel and enter into contracts and other arrangements for studies, analyses, and other services.

Coordination with other organizations

Section 207. This section states that the Director shall coordinate with the Domestic Council, the National Security Council, the Council on Environmental Quality, the Council of Economic Advisers, the Office of Management and Budget, and the Federal departments and agencies; utilize consultants and advisory panels and consult with individuals and groups throughout the society as he deems advisable; hold hearings; utilize with their consent the services of public and private agencies, organizations, and individuals, and transfer funds to other Federal agencies; that each agency of the executive branch is authorized to furnish the Director information necessary to carry out his functions; and that the Administrator of the National Aeronautics and Space Administration is authorized to assist the Director with respect to system analyses of alternative applications of science and technology.

Science, engineering, and technology report

Section 208. This section states that the President shall transmit an annual Science, Engineering, and Technology Report to the Congress, individuals and groups throughout the society as he deems advisable; which shall be prepared by the Office, with appropriate assistance from other agencies, consultants, and contractors. The report shall include the Office's discussion of options on Federal investments and priorities in science and technology, and shall deal, to the extent practicable and within the limitations of available knowledge and resources, with a range of national policy issues involving science and technology.

TITLE III—PRESIDENT'S ADVISORY COMMITTEE ON SCIENCE, ENGINEERING, AND TECHNOLOGY

Establishment

Section 301. This section authorizes the President to establish a President's Advisory Committee on Science, Engineering, and Technology.

Membership

Section 302. This section states that the Committee shall consist of the Director and between eight and fourteen other members appointed by the President; that the President shall appoint a Chairman and Vice Chairman; and that the members are entitled to be reimbursed for their official expenses and to receive compensation for their services at a rate not to exceed the daily rate prescribed for GS–18 of the General Schedule.

Federal science, engineering, and technology survey

Section 303. This section states that the Committee shall survey, examine, and analyze the overall context of the Federal science, engineering, and technology effort including missions, goals, personnel, funding, organization, facilities, and activities in general; that the Committee shall submit a report of its findings, conclusions, and recommendations to the President within one year of the appointment of a majority of its members; and that, after appropriate review, the President shall transmit the report to Congress, together with any recommendations he may wish to make concerning its findings.

Continuation of Committee

Section 304. This section states that the Committee will cease to exist ninety days after transmission of the report, unless the President makes a determination that it is advantageous for the Committee to continue in being, in which case the Committee shall exercise such functions as are prescribed by the President, with its members serving at the pleasure of the President.

Staff and consultant support

Section 305. This section provides for appropriate staff and consultant support to the Committee.

TITLE IV—FEDERAL COORDINATING GROUP FOR SCIENCE, ENGINEERING, AND TECHNOLOGY

Establishment and functions

Section 401. This section establishes the Federal Coordinating Group for Science, Engineering, and Technology, to be chaired by the Director, and to exercise the same functions as those heretofore exercised by the Federal Council for Science and Technology. These functions are purely advisory in nature and involve no exercise of authority over the participating agencies, whose participation is governed by their applicable statutes.

Abolition of Federal Council for Science and Technology

Section 402. This section abolishes the Federal Council for Science and Technology, which had been established by Executive Order in 1959.

TITLE V—STATE AND REGIONAL SCIENCE AND TECHNOLOGY PROGRAM

Establishment of Intergovernmental Science, Engineering, and Technology Advisory Panel

Section 501. This section establishes within the Office an Intergovernmental Science, Engineering, and Technology Advisory Panel, composed of the Director or his representative, the Director of the National Science Foundation or his representative, and one member from each State, to be appointed by the Governor of that State; provides for reimbursement for official expenses incurred by Panel members and for their compensation at a rate not to exceed the daily rate for GS–18 of the General Schedule; states that the Director or his representative shall serve as Chairman of the Panel; and states that the Panel shall meet at the call of the Chairman.

Functions of the panel

Section 502. This section states that the Panel shall advise and assist the Director in identifying and defining civilian problems at the State, regional, and local levels susceptible to scientific and technical solution or amelioration; in establishing priorities for addressing such problems; and in fostering the utilization of the results of Federal research and development activities so as to maximize their application to civilian needs.

Grants for State science, engineering, and technology advisory programs

Section 503. This section states: that the National Science Foundation is authorized to make grants to any State ot pay a part of the costs of establishing or strengthening offices of State science, engineering, and technology within the executive and legislative branches of the State government; that the purpose of any such office shall be to promote the wise application of science and technology to the needs of the State; that no grant to a State's legislature or executive branch may exceed $100,000; that the total amount granted to any State may not exceed $200,000; that the Federal share of the cost of the office shall be 80% of the total annual cost; that the State will assume the cost of any such office not later than two years after award of the grant; that the Director of the National Science Foundation shall approve any grant application which meets the requirements of this Act and such regulations as he may establish.

TITLE VI—GENERAL PROVISIONS

Definitions

Section 601. This section defines terms used in this Act.

Authorization of appropriations

Section 602. This section authorizes appropriations to carry out the provisions of this Act of $4,000,000 for fiscal year 1976; $1,500,000 for the period from July 1, 1976 through September 30, 1976; and $12,000,000 for fiscal year 1977.

Repealer

Section 603. This section repeals sections 1, 2, 3, and 4 of Reorganization Plan Numbered 2 of 1962 and section 2 of Reorganization Plan Numbered 1 of 1973.

Legislative history

The Committee on Labor and Public Welfare began serious consideration of national policies and priorities for science and technology in the course of committee examination of the problems of postwar economic conversion in the Ninety-first Congress. On December 1 and 2, 1969, the Committee held hearings on Postwar Economic Conversion. The Committee heard testimony from Professor Warren L. Smith, Department of Economics, University of Michigan and former member of the Council of Economic Advisers; Dr. Seymour Melman, economist and professor of industrial engineering at Columbia University; the late Walter P. Reuther, President of the United Auto Workers; Dr. Wilfred Lewis, Jr. of the National Planning Association; the Honorable Archibald S. Alexander, former Assistant Director for Economics of the U.S. Arms Control and Disarmament Agency; and Nathaniel Goldfinger, Director of Research, AFL–CIO.

Additional hearings on Postwar Economic Conversion were held before the Committee in Lexington, Massachusetts on March 23,

1970, and in Framingham, Massachusetts on April 3, 1970. At those hearings the Committee heard testimony from General James Gavin, Chairman of the Board, Arthur D. Little, Inc.; Dr. George Gols of Arthur D. Little; Carroll Sheehan, Commissioner of the Massachusetts Department of Commerce and Development; Bernard O'Keefe, President of E.G. & G. Corporation; D. Justin McCarthy, President of Framingham State College; Joseph Hyman, President of Hycor Corporation; Dr. Arthur S. Obermayer, President of Moleculon Corporation; Dr. Duncan MacDonald, business consultant; and William Alexander, President of the Research, Development, and Technical Employees Association, MIT Laboratories.

The testimony and statements for the record submitted at these hearings provided the Commitee with a comprehensive background on the problems of economic conversion and a realization that national legislation was required to enable the country to build a strong base of civilian science and technology.

As Chairman of the Special Subcommittee on the National Science Foundation, Senator Edward M. Kennedy began developing legislation aimed at meeting needs in this area. On August 14, 1970, he introduced S. 4241, the Conversion Research and Education Act. Although it was not possible to hold hearings on the bill before the end of the Ninety-first Congress, the bill was subjected to close scrutiny by leading authorities in this field throughout the Nation.

After careful consideration of their comments and suggestions, the bill was revised and re-introduced by Senator Kennedy in the Ninety-second Congress on January 25, 1971, as S. 32, the Conversion, Research, Education, and Assistance Act. The bill was referred to the Committee on Labor and Public Welfare and assigned to the Subcommittee on the National Science Foundation

The bill was circulated among leading authorities throughout the Nation who were expert in various of its aspects, and their comments and suggestions were carefully studied by the Subcommittee. At the same time a companion bill to S. 32 had been introduced in the House of Representatives as H.R. 34, by Congressmen John W. Davis and Robert N. Giaimo and one hundred and eleven cosponsors in January 1971. H.R. 34 was virtually identical to S. 32. Consequently the eight days of comprehensive hearings which the House Committee on Science and Astronautics held on H.R. 34 on June 22, 23, 24, July 13, 14, 15, and August 5 and 6, 1971 proved extremely helpful in the National Science Foundation Subcommittee's consideration of S. 32.

Based on the extensive comments and suggestions which were received over these months, from various experts and organizations throughout the country and through the House hearings, Senator Kennedy filed Amendment 469 to S. 32 on October 13, 1971. This amendment was designed to take account of many of the suggestions which the Subcommittee had received.

On October 26 and 27, 1971, the Subcommitte on the National Science Foundation held hearings on S. 32, including consideration of Amendment 469. (The hearings also considered S. 1261, the Economic Conversion Loan Authorization Act, which is still under study by the Subcommittee on the National Science Foundation.) Testimony was heard from the Administration spokesman, Dr. William D. McElroy, Director of the National Science Foundation; Paul Robbins, Executive Director of the National Society of Professional Engineers; Jack Golodner, Executive Secretary of the Council of AFL-CIO Unions for Scientific, Professional, and Cultural Employees; Sanford V. Lenz, Chairman, Professional, Technical, and Salaried Conference Board, IUE, AFL-CIO; Mrs. Betty Vetter, Executive Director, Scientific Manpower Commission; Professor Paul H. Thompson, Graduate School of Business Administration, Harvard University; and four unemployed engineers—Robert Fraser from Lincoln, Massachusetts, S. Robert Salow from Newton, Massachusetts, Charles Laible from Cherry Hill, New Jersey, and Nathan N. Budish from Seattle, Washington.

In addition to the testimony received at the hearings, the hearings record also included statements on the legislation from the Comptroller General and the Administration and from twenty-seven organizations and individuals with special competence in this area. Since the hearings record was published, scores of other statements had been received from interested organizations and individuals with respect to S. 32.

Based on all of the information and the views which were received, the bill was further revised and considered by the Special Subcommittee on the National Science Foundation in an Executive Meeting on April 5, 1972. At that meeting, upon the suggestion of Senator Dominick, the Subcommittee agreed to submit the bill (in its revised form) to the Executive Agencies and the General Accounting Office for further comment. Letters were received from sixteen agencies and the GAO, and the specific comments were taken into careful account by the Subcommittee.

Based on those comments, the bill was further revised and considered again by the Subcommittee in Executive Meeting on May 30, 1972. At that meeting, the Subcommittee, without opposition, favorably reported the bill to the full Committee with an amendment in the nature of a substitute and with a title amendment.

The bill was considered by the full Com-

mittee on Labor and Public Welfare in Executive Meetings on June 21 and June 28, 1972. At the June 28 meeting, the Committee on Labor and Public Welfare ordered the bill, with a modified amendment in the nature of a substitute and with a title amendment, reported favorably to the Senate. On the roll call vote to report, all seventeen members of the Committee were recorded as voting to report the bill favorably.

On August 17, 1972, the bill was considered by the Senate, and passed by a vote of 70 to 8. It was then sent to the House of Representatives where it was referred to the Committee on Science and Astronautics. No action was taken by the House prior to the adjournment of the 92d Congress.

On January 4, 1973, Senator Kennedy reintroduced S. 32. On May 2, 1973, Senator Dominick introduced S. 1686, the Civilian Science and Technology Policy Act of 1973. Both bills were referred to the Senate Committee on Labor and Public Welfare.

S. 2495 was introduced on September 27, 1973 by Senator Magnuson, Senator Moss, and Senator Tunney. The bill was referred jointly to the Committee on Commerce and the Committee on Aeronautical and Space Sciences. On September 28, 1973 unanimous consent was given that when the two Committees report the bill, it would be rereferred to the Committee on Labor and Public Welfare.

On January 18, 1974 a working draft of a revised version of S. 2495 was prepared by the Commerce and Aeronautical and Space Sciences Committees and distributed for comments.

Joint hearings on S. 2495 and the working draft were held by the Commerce and Aeronautical and Space Sciences Committees on March 11 and March 21, 1974.

Subsequent to those hearings, the bill underwent further revisions, and Amendment No. 1537 to S. 2495 was introduced by Senators Magnuson, Moss, and Tunney on June 27, 1974. The Commerce and Aeronautical and Space Sciences Committee held a joint hearing on Amendment No. 1537 to S. 2495 on July 11, 1974. Witnesses at the July 11 hearing included four former Presidential Science Advisers: Dr. Edward E. David, Jr., Dr. Lee A. DuBridge, Dr. Donald F. Horning, and Dr. George B. Kistiakowsky.

The Commerce Committee met in Executive Session on July 31, 1974 and ordered S. 2495 reported, with an amendment in the nature of a substitute. Identical action was taken by the Aeronautical and Space Sciences Committee at its Executive Session held September 18, 1974. On September 18, 1974, S. 2495 was referred to the Committee on Labor and Public Welfare for further consideration.

On October 8, 1974 the Special Subcommittee on the National Science Foundation held a hearing on S. 32, S. 1686 and S. 2495. Testimony was heard from the Administration spokesman, Dr. Guyford H. Stever, Director of the National Science Foundation and Science Adviser; Dr. Edward Wenk, Jr., Chairman of the Committee on Public Engineering Policy of the National Academy of Engineering; and Dr. Thomas G. Fox, Chairman of the Governor's Science Advisory Committee, State of Pennsylvania.

Based on the testimony which was presented at the hearing, the three bills were further revised and considered by the Subcommittee in an Executive Meeting on October 8, 1974. At that meeting, the Subcommittee unanimously favorably report S. 32, to the full Committee with an amendment in the nature of a substitute and with a title amendment. All seven members of the Subcommittee were recorded as voting to report the bill to the full Committee.

The bill was considered by the full Committee on Labor and Public Welfare on October 8, 1974. The Committee ordered the bill, with an amendment in the nature of a substitute and with a title amendment, reported favorably to the Senate. All sixteen members of the Committee were recorded as voting to report the bill favorably.

The Senate passed the bill by unanimous voice vote on October 11, 1974. It was then sent to the House of Representatives where it was referred to the Committee on Science and Astronautics. No action was taken by the House prior to the adjournment of the 93rd Congress.

On January 15, 1975, Senator Kennedy reintroduced S. 32 (in a form identical to the bill that had passed the Senate in October, 1974) with the cosponsorship of Senators Moss and Tunney and 29 other Senators. This bill was referred jointly to the Committees on Labor and Public Welfare, Commerce, and Aeronautical and Space Sciences.

A significant break occurred on May 22, 1975, when President Gerald R. Ford met with Vice President Nelson A. Rockefeller, Senators Moss, Goldwater Beall, and Laxalt, and Congressmen Teague, Mosher, Thornton, Conlan, and Symington, to announce his approval of a proposal prepared by the Vice President to re-establish the Science and Technology Office in the White House, and to do so by legislation. The President decided in favor of a single director with a small staff, rather than a council. This proposal was introduced in the Senate on June 20, 1975, as S. 1987 by Senator Moss (for himself and Senator Goldwater) (by request) and was also referred jointly to the Committees on Aeronautical and Space Sciences, Commerce,

and Labor and Public Welfare. The provisions of S. 1987 were subsequently amended and incorporated in Titles II and VI of S. 32.

In the meantime, on June 6, 1975, Senator Kennedy presided at an historic White House Science Advisory Conference. At this Conference in the Dirksen Senate Office Building, the Vice President met with Senator Kennedy, as host, and Senators Moss, Tunney, Javits, Goldwater, Schweiker, Mathias, Beall, Stafford, Domenici, Laxalt, and Garn. This was the first time in modern American history that a Vice President of the United States sat down with members of the United States Senate, in full public view, to participate in a free, informed, bipartisan discussion of national policy needs. The Conference was not a hearing and did not consider specific legislative proposals, but provided an opportunity for the Vice President and the Senators to discuss the national issues involved in the re-establishment of a White House Science Advisory Office. The Conference proved extremely useful in the subsequent development of the Senate legislation.

On October 28, November 4, and November 12, 1975, joint hearings on S. 32 were held before the Special Subcommittee on the National Science Foundation of the Committee on Labor and Public Welfare; the Special Subcommittee on Science, Technology, and Commerce of the Committee on Commerce; and the Committee on Aeronautical and Space Sciences. Senator Kennedy chaired the hearing on October 28th; Senator Tunney, the hearing on November 4th; and Senator Moss, the hearing on November 12th. During the period after the President's announcement of May 22, 1976, the House Committee on Science and Technology held extensive hearings on several science and technology policy bills, culminating in the passage of H.R. 10230 by the House on November 6, 1975. This bill was also referred jointly to the Committee on Aeronautical and Space Sciences, Commerce, and Labor and Public Welfare. Provisions of H.R. 10230 were particularly examined in the aforementioned hearing chaired by Senator Moss on November 12, 1975.

Testimony was provided by Dr. Philip Handler, President of the National Academy of Sciences; Dr. Emanuel R. Piore, Retired Vice President and Chief Scientist, IBM Corporation; Dr. Eugene B. Skolnikoff, Director of the Center for International Studies and Professor of Political Science at Massachusetts Institute of Technology; Dr. James R. Killian, Jr., author of the National Academy of Sciences "Report on Science and Technology in Presidential Policymaking"; Dr. Roger Revelle, Chairman of the Board, American Association for the Advancement of Science; Dr. Richard Scribner, Head of the Office of Special Programs of the American Association for the Advancement of Science; Dr. Thomas G. Fox, Science Adviser to the Governor of Pennsylvania; Dr. H. Guyford Stever, Director of the National Science Foundation and Science Adviser to the President; and Mr. Arthur P. Stern, President of the Institute of Electrical and Electronic Engineers.

Following the Conference with the Vice President and the hearings before the Senate Committees, the staffs of the three Committees made proposed revisions to S. 32. In developing these revisions, extensive discussions were held with representatives of the scientific and technical community and with responsible staff members of the Executive Office of the President, the National Science Foundation, and the House Committee on Science and Technology. A final version was prepared on January 19, 1976, for the consideration of the Committees.

On January 21, 1976, the Committee on Aeronautical and Space Sciences met in executive session and, without objection, ordered S. 32, with an amendment in the nature of a substitute, favorably reported to the Senate.

On January 27, 1976, the Special Subcommittee of the National Science Foundation met in executive session and voted unanimously that S. 32, with an amendment in the nature of a substitute be reported to the full Committee on Labor and Public Welfare. On January 28, 1976, the Committee on Labor and Public Welfare met in executive session and unanimously voted favorably to report S. 32, with an amendment in the nature of a substitute, to the Senate. On January 29, 1976, the Committee on Commerce met in executive session and without objection, voted favorably to report S. 32, with an amendment in the nature of a substitute, to the Senate. The amendment in the nature of a substitute to S. 32 adopted by the Committee on Labor and Public Welfare, which in turn was identical to the one adopted by the Committee on Aeronautical and Space Sciences.

Explanation of Need

Science and technology have become central to Western civilization. Throughout history, science and technology have had occasional, but significant impacts on military capabilities and economic development. However, only recently have we seen the importance of science and technology in dealing with civilian needs. Our military security depends on scientific research and development. Our economic development and productivity, along with our international competitive position, depend on increasing technical innovation to provide new products and services which meet changing needs. And the

quality of life in our society—the adequacy of health care, the preservation of the environment, the adequacy of educational programs, the provision of food, housing, transportation and communication services, and the very sources of energy which make other services possible—all are interwoven with, and depend in part on, the efficacy of scientific and technical progress.

Since World War II the principal focus of the Nation's scientific programs has been on defense, and since Sputnik, on space. In these activities, the Federal Government has been the major supporter of research and development. The achievements of the Nation's scientists and engineers in these areas have been sweeping in scope, and staggering in their impact. The development of an overwhelming arsenal of nuclear weapons, ballistic missiles, travel to the Moon and probes to other planets are now commonplace facts to our children.

The application of science and technology to national security needs and space objectives have had some important spin-off effect on the civilian area of our economy and society. Computers, the vast expansion in electronics, and passenger jet aircraft are all derived from military and civilian space R. & D. programs. But many areas of the civilian sector have not yet been significantly affected by scientific research. Textile, shoe, and furniture manufacturing are three examples of civilian industries which are still dependent on traditional methods and which have not reaped the benefits which scientific advance can provide.

And in the public service sector of the economy, the extent to which modern technology has been applied is even less. Trash in our city streets is still collected in the same inefficient manner, and still disposed of in vast rubbish heaps that mar our countryside and pollute our air. Transportation in our metropolitan areas becomes more snarled and inconvenient all the time. And adequate health care for all our citizens continues to become more costly, even when it is available.

In the civilian sector of our economy and in public services, the vast promise of science and technology has not been realized. A principal reason for this is that the Nation has lacked sound national policies and priorities for science and technology.

This has been especially true since 1973 when Reorganization Plan Number 1 abolished the White House Office of Science and Technology. Since that time the President has been without the top-level scientific assistance he needs to deal with the complex technical issues of our time.

Science for most of our citizens is a mysterious code that can only be deciphered by specialists. The policy issues faced by the President involve too many complex technological components for him not to have immediate access to the very best scientific advice our Nation has to offer.

No single scientist can provide such advice. But a first-rate science policy office with a capable staff can rapidly tap the top-flight technical talent throughout our society to provide the President with the best advice possible. This office can also provide a mechanism to anticipate future problems and needs, help coordinate the various Federal research and development activities, and interact with the States concerning their needs related to science and technology.

A White House Science Adviser, (a) with effective relationships with the President, within the Executive Office, and with the various agencies, (b) will access to the technical community, and (c) with adequate resources to do the job, will assure that the President and the Nation will be in a much better position to deal with complex issues involving science and technology.

Conference With the Vice President

The Conference with the Vice President on June 6, 1975, provided valuable perspective in the development of the legislation. The following excerpt from that conference provides useful background in understanding the provisions of the bill as reported by the three Committees (pages 30–31, "Proceedings of the White House Science Advisory Conference, 1975, Special Subcommittee on the National Science Foundation of the Committee on Labor and Public Welfare, July 1975):

"Senator KENNEDY. If I can carry on a little bit further based on what Senator Javits was talking about. Mr. Vice President, do you expect in this annual report that one of the responsibilities of the advisory group would be to indicate what should be the national investment in the areas of science and research, whether we ought to establish some goals in those areas, and perhaps how we ought to be allocating the resources within these goals so that we will be looking ahead to the allocations of resources in the area of science and technology over the period of, say 5 years?

"Is this something you think should be included or would be useful in providing both the country and the Congress, with some guideposts as we consider this whole area?

"Vice President ROCKEFELLER. I would have to say, Senator, I think that is the key to it. I think it is the heart, what you have gone right to. It is the conceptual approach to the role of science and technology in our whole society of life, its future, and our role in the world.

"I think that is the heart of it. I think it

has got to go further, in a sense. It has to go back—in the report, he has to go back and look at what the high schools are doing, the number of students coming into the field, what colleges are doing, and what has been done by government and by the private sector in these fields, so that, to me, I share completely that thought that this would be basic.

"And this report prepared by Dr. Hans Mark is very much in that direction.

"These things just do not happen. We have to plan and, as you say, we have to plan ahead of time, if you are going to get there. And we are beginning to fall behind in this whole field.

"Senator JAVITS. That is most alarming.

"Senator KENNEDY. One of the things that always strikes us in the National Science Foundation Subcommittee is the fact that, as you well know, military R. & D. is not considered within the scope of the Director of the National Science Foundation, who has been serving as the President's science adviser. And I think your comments have been very reassuring in indicating that that military research and development will certainly be within the scope of the science adviser as you see that function.

"One of the things which many of us have been interested in is the very large amount of research that is being done for defense and space-related programs.

"I do think we have seen, in terms of our competitive position in the world, that many of our friends, allies, and competitors in the free world, are devoting a good deal more resources to civilian science and technology, than we are.

"Vice President ROCKEFELLER. That is right.

"Senator KENNEDY. And we, as a country and as a society, ought to recognize that—which I am not sure that we do at the present time—and begin to move the country more in those directions.

"Vice President ROCKEFELLER. May I just say on that, that again I agree."

Witnesses Testimony

All of the witnesses who appeared in the hearings strongly supported the re-establishment in the White House of a Science and Technology Advisory Office. The following excerpts from the testimony help clarify the need for, and intent of, various provisions in the bill as reported:

Dr. Philip Handler (President of the National Academy of Sciences):

"A congressional statement of policy (for science and technology) could provide a perspective and sense of purpose and direction to development of Federal programs and detailed policies. It would guide the many individual decisions that, collectively, determine how wisely and well we are able to realize the potential of science and technology in serving the public good."

Dr. Emanuel R. Piore (Retired Vice President and Chief Scientist, IBM Corporation):

"Another function that should be stressed in a very important manner, is that the group or Science Adviser must take an active role in assuring the country the health of scientific and technical institutions, the Government labs, the universities, the nonprofit labs, the scientific and technologic health of our industry. This is not stressed. And I will return to the health of our laboratories in a moment.

"Second, I think it is important that the legislation state whether they have a Council or single person, that "he" will be a member of the National Security Council, "he" will be a member of the Domestic Council, and not say "he" will coordinate or develop appropriate working relations. It is very important that a technical person sit when policy is debated, understand whether the policy needs technological backing, whether it is possible to get the technological answer in time to serve the national purpose. There are occasions where action is required based on inadequate knowledge.

"Developing appropriate working relationships will not service the purpose. The Security Council may assign the wrong problem or irrelevant problem to the policy, and the same is true of the Domestic Council.

"The Office of Science Adviser to the President was most effective when there was a complete open door to Killian, Kistiakowsky, Wiesner to the Security Council. We would never have been able to come up with the policy with regard to arms limitation without that open door. And, thus, I would hope that the language would be changed where it would be mandatory for the President to put these people on the Councils and not just hope that the adviser will have an open door.

"It becomes a little more difficult to define the relation between the Science and Technology Council and the Bureau of Management and Budget. It is the Presidential budget and it is not the budget of the Council. And here the annual report can play a very important role. The drafts of the annual report will be seen by the Bureau of the Budget. Debate can take place. Disgreements resolved. This also will provide the best possible coupling with the other agencies. If they know annually that their R. & D. budget will be discussed by the Council or the Adviser and coupled directly to the Bureau of the Budget, there will be no problem of having coordination. I had partial coordinating responsibility for research in the Navy when I was younger. Once the budget is at stake, coordination becomes almost automatic.

"This is also related to the annual report which should deal with the current situation. I have observed very important and well presented documents on the future of various areas of science and technology in our society. Congress files them. To date I have not observed any hearings in Congress on these reports.

"Congress ought to be aware when they vote the authorization and the appropriation what are the critical problems in science and technology covered in the executive department submissions. The other type of report is in its own right very important, necessary in that it is vital to understand what the future holds for us.

"Therefore, I see the Council having two very fundamental functions. One is to look to the future. The other is to get word to Congress what budgetary items mean, as far as its impact on our daily life. Congress and its staff are well rounded, and thoroughly understanding of all the social issues and implications of various monetary and legislative action. We are trying to get a similar sensitivity in science and technology. That is why I would look to the annual report to address itself to Congress via the President, really pointing out what that budget means to the health of science, to the health of technology, to our foreign policy, and all these other items that science and technology is involved in."

Dr. Eugene B. Skolnikoff (Director of the Center for International Studies and professor of Political Science at Massachusetts Institute of Technology):

"Given the fact that this legislation is designed to provide for the long term, I wonder if there should not be a reference to the possibility of creating once again a standing advisory committee for science and technology. This may be more important for an office headed by a single director than for a council of advisers.

" . . . There are several parts to this international role. One is the integral relation of science and technology to many issues of foreign policy, or to domestic policy with international implications—it is a cliche to assert that it is increasingly difficult to separate foreign from domestic affairs; but it is also true—a good share of the advisory relationship with the President should and hopefully will be concerned with international issues in which science and technology play an important, sometimes crucial, role.

"A second aspect of the international role is policy for international cooperation in science and technology, which is in fact referred to in the House bill. It is an important issue area, but one that to my mind is simply not as significant as are the broader international policy questions.

"Third is an aspect often neglected that I believe should be an important concern of a White House science officer. I refer to the fact that a substantial share of Federal R. & D. expenditures are motivated in large measure by international considerations (defense, space, some of atomic energy and others). And a good share of the remainder will affect our international relations and foreign policy (e.g., energy, agriculture, geophysics) when the R. & D. comes to fruition. And, hardest of all to define, many R. & D. projects are not being done at all that could affect the world and our policies favorably."

Dr. James R. Killian, Jr. (author of the National Academy of Sciences "Report on Science and Technology in Presidential Policymaking"):

"I have suggested the importance of the advisory mechanism's being closely related to other agencies in the Executive Office of the President. It would be my judgment that the head of this advisory mechanism should be a member of the Domestic Council and he should be, if not a member of the National Security Council, closely related to its work.

"I found in a number of experiences when I was Science Adviser to the President, being present at a meeting of the National Security Council enabled me at that time to point out to the President certain policy questions that were under consideration where there was a component involving science and technology that would not be normally recognized. I found that to be, and I think the President found that to be a important way in which the Science Adviser could operate.

"The advisory mechanism, working with the National Security Council and the Department of State, should also be able to contribute to those areas of foreign policy strongly affected by scientific and technological considerations. And finally, the advisory mechanism should cooperate closely with the Office of Management and Budget on significant budget and management issues involving science and technology.

". . . I do also feel that there should be an annual report of a very special kind prepared by the mechanism created in the White House. I know that it is difficult to contemplate any kind of comprehensive report on the state of science in the country. That is not what I am talking about. And that is not what the NAS Committee recommended.

"Rather, it was urging that there be an opportunity for this Science Adviser in the White House annually to submit to the President or to the Congress a statement of what he thinks are some of the acute and current problems that they should be aware of and to give attention to. And what are some of the budgetary problems that we face and problems of technology assessment.

". . . I think, for example, of the importance of a reordering of priorities which will enable our Government to generate and encourage new technologies which can contribute to the strength of our economy. Prof. Robert Gilpin of Princeton, an economist, in his report for the use of the Joint Economic Committee of the Congress, has presented an eloquent argument for rejuvenating our technological vitality through changes in the Nation's priorities in research and development funding. He has argued persuasively that priorities have been 'too much set by the cold war and a drive for national prestige.'

"I share that kind of comment; and I think we have a pressing opportunity to deal with this aspect of the Government's policies as related to science and technology.

"Next, the whole domain of national security, and I include in national security arms limitation, can benefit from objective scientific advice formulated at the level of the Presidency and outside of the Department of Defense and the Department of State.

"I am deeply disturbed by the amount of complacency in our country today in regard to the hazards involved in the arms race and in the proliferation of nuclear weapons. Scientists and engineers have an essential role to play in the formulation of policies with respect to the control of nuclear weapons. I find deeply disturbing recent suggestions that we might find it desirable to use nuclear tactical weapons and that a nuclear exchange could in any way be handled in an acceptable way.

". . . More stress, particularly in dealing with a relationship with the National Security Council, would be useful because I think if I were to have a general criticism of the House bill, it would be that it is somewhat bland with respect to the relationship of the proposed science adviser and his associates with the Domestic Council and with the National Security Council.

"And I think it is particularly important that the bill make clear that Congress expects a working relationship between those agencies as well as the OMB, or else this advisory mechanism can become isolated and is futile.

"So that is a very important point.

"We have had periods recently where I think this relationship with the National Security Council has become inoperative and ineffective in terms of the science advisory arrangement that then existed."

Dr. Roger Revelle (Chairman of the Board, American Association for the Advancement of Science):

"In the 'Statement of Findings and Declaration of Policy,' of S. 32, Federal funding for science and technology is referred to as an investment in the future which must be a 'continuing investment' because it is 'indispensable to sustained national progress.'

"The same idea is expressed differently in that 'the manpower pool of scientists and engineers constitutes an invaluable national resource which should be utilized to the maximum extent possible at all times."

"This view of Federal funding for science and technology as an investment instead of simply a component of current operating expenditures recognizes both the necessity of maintaining as much stability as possible in our national research effort and the hard truth that the benefits of research, though very great, will almost never be short-term ones.

"I do not want to imply that the budget for research and development should be sacred and unchanged from year to year.

"Much short-term development work can be postponed or put on the shelf when warranted by economic conditions. But long-term research and education which produce the intellectual capital for the future are investments that should be protected and sustained.

". . . The difficulty could be resolved if the Council of Advisers for the Office of Science and Technology had responsibility for recommending a long-term—say 5 years—investment program for science and technology, subject to the year-to-year fluctuations imposed by economic exigencies as reflected in the budget prepared by the Office of Management and Budget.

"The preparation of an investment program for science and technology would give genuine substance to the planning function envisioned in both H.R. 10230 and S. 32.

". . . A statement in the bill passed by Congress emphasizing that the scope of the Science Adviser's responsibilities should include the scientific and technological aspects of policies for national security and international relations and oversight of programs supporting these policies could be useful."

Dr. Thomas G. Fox (Science Adviser to the Governor of Pennsylvania):

"I think the key factor is that these bills provide at the Federal level the kind of input from State and local government we need. I refer to provisions like the one in S. 32 to provide an Intergovernmental Policy Council and to provide to the States some financial support from the Federal level to implement this program. If such provisions would be instituted, we indeed could move ahead very far and rapidly in establishing intergovernmental partnerships in managing the use of technology that are absolutely required.

". . . There are many States that are deeply into this with 10 years of positive

experience. And there are a number of States that have studied what to do. For example, here is an excellent study by Puerto Rico on what they need to do, one by the State of California and one by Hawaii. I would say there are at least 20 or 30 States that have had good experience or have comprehensive and sophisticated studies of this question. I think we should move ahead and not wait."

Mr. Arthur P. Stern (President of the Institute of Electrical and Electronic Engineers):

". . . while it would be wrong to force on the President anything that he does not readily accept, it seems to me difficult to imagine that a science and technology policy adviser could be effective unless he sits on the Domestic Council and on the National Security Council, and unless he has a great say in international matters, because all these areas are permeated today by science and technology considerations—or they should be, if they are not—and science and technology are either there in the foreground, or certainly should be there in the background, of almost any important policy decision.

". . . Next, in comparing S. 32 with H.R. 10230, we found numerous differences. One of them was particularly striking.

"S. 32 mentions that "the pool of scientists and engineers is an invaluable national resource." It goes on at another point to state that "scientists and engineers must have continuing opportunities for socially useful employment in positions commensurate with their professional and technical capabilities."

"H.R. 10230 does not do any of this. Not only it doesn't do that, but a reference which was in the original text of H.R. 8058 and which was directed toward insuring the "full utilization of the technical manpower" of this country was stricken from the final text.

"We feel that it is inconceivable to make a major step toward recognizing science and technology and its central role in this country without looking out for the practitioners of science and technology. It is vital for this country, so that we maintain the leadership of which I talked before, that we attract the brightest, that we teach them well, that we give them appropriate rewards, and that we insure that they age in dignity.

"It is also important, in order to be able to do a good job in this area, that we establish an adequate data base to know where we stand and where we go with our scientific and engineering manpower.

". . . If the Science Adviser has no substantial influence on the budget process, then he becomes the decoration that I referred to before.

"The general intent of the Federal Government in science and technology is well and nice, but what really matters is what is getting done, and that which is being done is expressed in one way only—besides speeches—and that is money that is being spent.

"So I think the answer to that question must be strongly affirmative. The Science Adviser must have a role in budget preparation or else he will not be effective."

THE VICE PRESIDENT,
Washington, December 3, 1975.

Hon. EDWARD M. KENNEDY,
U.S. Senate,
Washington, D.C.

DEAR TED: It appears that we are drawing close to achieving our mutual objective of reestablishing an Office of Science and Technology Policy in the White House. I know you share my enthusiasm. I expect this office to be an important new source of advice for the President on the complex scientific and technological factors that arise in connection with a multitude of public issues.

This must be particularly gratifying to you in view of your many years of struggle in the Congress to establish a legislative framework for national science and technology policy and priorities, and also in view of the Senate's having passed your science and technology policy bill in two previous Congresses.

As you know, the House has recently passed H.R. 10230, which has many of the same objectives as your bill. We are now in a position to see these objectives implemented. The recent hearings which you, Senator Moss, and Senator Tunney chaired have provided even further momentum toward enactment of appropriate legislation.

Our discussions last spring, culminating in a conference with interested Senators in June, played an important part in achieving this result. I want to express again my personal appreciation to you for the initiative, candor, and cooperation you have exercised in dealing with this issue.

I know you will agree with me as to the urgency of completing Congressional action on this bill so that the new advisory machinery can be promptly installed in the White House. In order to expedite this matter, I respectfully recommend to you and your Senate colleagues that you consider accepting the House bill intact, without further alterations in the Senate. As you know, the President has indicated his willingness to accept the bill prepared by the House Committee on Science and Technology.

Of course, I realize from our discussions that you and your Senate colleagues may differ with respect to the details of a number of provisions in the House bill. However, in the future, there will undoubtedly be further opportunity to amend this legislation if our initial experience indicates that changes are desirable. Indeed it is my understanding that

the House bill provides for establishing a committee to survey science and technology policy, programs, and organizations and to make recommendations for improvements within two years.

In any event, I hope you will agree with me that the overriding need at this time is to establish an Office of Science and Technology Policy in the Executive Office of the President as expeditiously as possible. In view of the already attenuated history of this legislation, efforts to amend the House bill in the Senate and the resultant need for a conference with the House could only lead to additional months of delay. Accordingly, I urge you to move for prompt Senate approval of the House bill.

Once again I want to express my personal thanks to you for your leadership in helping to achieve this goal of national significance. It has been my great honor and privilege to work closely with you on this issue.

Sincerely,

NELSON.

U.S. SENATE,
Washington, D.C., December 8, 1975.

Hon. NELSON A. ROCKEFELLER,
The Vice President, Washington, D.C.

DEAR MR. VICE PRESIDENT: Thank you for your letter regarding the re-establishment of an Office of Science and Technology Policy in the White House. I appreciate your generous comments about my role in this endeavor, in which I have greatly enjoyed working together with you. I believe our shared views on the importance of this activity to the nation have helped in building support for this legislation within the Congress and the Administration.

As you know, Senators Moss and Tunney have also played major leadership roles in the development of the Senate legislation. Accordingly, I have discussed your letter with them, and we have given a great deal of serious consideration to your recommendation that the Senate accept the House bill intact without further Senate amendments. In addition, we have discussed this matter with various leaders of the scientific and technical community.

Following these discussions, Senators Moss, Tunney, and I have concluded that there are a number of areas in which the House bill should be strengthened, and that it is in the national interest that we attempt to improve the legislation in the Senate. I would, of course, be happy to discuss the key provisions of the legislation with you, or to have our staffs go over the specific legislative prop[illegible] detail.

And I can assure you that Senators Moss, Tunney, and I shall make every effort to move as expeditiously as possible toward prompt enactment of this legislation, so that the nation will soon be in a strong position to set its policies and priorities for science and technology.

It has been a great pleasure to work with you on this matter over the past year, and I look forward to our continued cooperation on this important issue.

With best wishes,

Sincerely,

EDWARD M. KENNEDY.

U.S. SENATE,
Washington, D.C., December 16, 1975.

Hon. FRANK CHURCH,
Chairman, Select Committee on Intelligence, U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: I am writing to request your opinion on a legislative matter to which your experience as Chairman of the Select Committee is highly relevant. This concerns S. 32, the National Policy and Priorities for Science and Technology Act.

Among other things, this bill re-establishes the position of a Science and Technology Adviser to the President. We have received recommendations from distinguished leaders of the scientific community that the bill stipulate that the Science Adviser to the President also serve as an adviser to the National Security Council on matters dealing with science and technology. It is their belief that the Science and Technology Adviser to the President could make a significant contribution to those deliberations of the National Security Council to which science and technology are relevant.

Subsection 207(b) of the bill has been drafted to reflect those recommendations. In drafting the subsection, we followed the relevant language of the comparable provision in the C.I.A. statute (50 U.S.C. 403 d(1)), which makes the Director of C.I.A. an adviser to the N.S.C. Attached is a copy of page 42 of the December 15, 1975 print of the bill, which contains that subsection. Attached also is a copy of the entire print of the bill for your reference.

I would greatly appreciate your views as to the desirability of having the Science and Technology Adviser to the President also serve as an adviser to the N.S.C., and any specific comments you might wish to make with regard to the particular subsection we have drafted.

Thank you very much for your attention to this matter.

Sincerely,

EDWARD M. KENNEDY.

COMMITTEE ON FOREIGN RELATIONS,
Washington, D.C., December 18, 1975.

Hon. EDWARD M. KENNEDY,
U.S. Senate,
Washington, D.C.

DEAR TED: This is in response to your in-

quiry of December 16 regarding the desirability of the Science and Technology Adviser to the President also serving as an adviser to the National Security Council (N.S.C.).

I think this is an extremely constructive suggestion and one which I personally endorse strongly, based on my experience as Chairman of the Select Committee on Intelligence. The National Security Council considers matters of the utmost national significance, frequently including issues to which scientific and technological factors are highly relevant. I believe the Science and Technology Adviser to the President could make a significant contribution to such deliberations and welcome the initiative you have taken in this regard. I have examined subsection 207(b) of your December 15, 1975 print of S. 32, which I understand is patterned after the C.I.A. statute, and consider it a suitable expression of the advisory function which the Science and Technology Adviser to the President should discharge with respect to the National Security Council.

Accordingly, I strongly support the inclusion of this provision in S. 32, and its approval by the Senate.

Sincerely,

FRANK CHURCH.

NATIONAL POLICY, ORGANIZATION, AND PRIORITIES FOR SCIENCE, ENGINEERING, AND TECHNOLOGY ACT OF 1976

That this Act may be cited as the "National Policy, Organization, and Priorities for Science, Engineering, and Technology Act of 1976".

TITLE I—NATIONAL SCIENCE, ENGINEERING, AND TECHNOLOGY POLICY AND PRIORITIES

FINDINGS

SEC. 101. The Congress, recognizing the profound impact of science, engineering, and technology on society, and the interrelations of scientific, engineering, technological, economic, social, political, international, and institutional factors, hereby finds that—

(1) Federal funding for science, engineering, and technology represents an investment in the future which is indispensable to sustained national progress and human betterment;

(2) the manpower pool of scientists, engineers, and technicians constitutes an invaluable national resource which should be utilized to the fullest extent possible;

(3) the scientific, engineering, and technological capabilities within the United States, when properly fostered, applied, and directed, can effectively assist in improving the quality of life, in anticipating and resolving many critical and emerging international, national, and local problems, in strengthening America's international economic competitive position, and in furthering the Nation's foreign policy objectives;

(4) strong participation by State and local governments is essential to the successful solution of many civilian problems, and in developing programs for the application of science, engineering, and technology to civilian needs and to setting priorities for civilian research and development activities;

(5) the widespread influence of technology in society requires sound planning and management to meet human needs;

(6) the maintenance and strengthening of diversified scientific, engineering, and technological capabilities in government, industry, and the universities, and the encouragement of independent initiatives based on such capabilities, are essential to the most effective use of science, engineering, and technology in resolving critical and emerging national problems;

(7) a systematic approach is needed to identify and anticipate critical and emerging national problems and to analyze, plan, and coordinate Federal science, engineering, and technology programs, policies, and activities intended to contribute to the resolution of such problems, including long-range, inclusive planning as well as intermediate and short-range program development; and

(8) the effectiveness of scientific, engineering, and technological contributions to the achievement of national goals depends on the maintenance of a strong base of knowledge in science, engineering, and advanced technology together with a resource of highly qualified scientists and engineers.

DECLARATION OF POLICIES AND PRIORITIES

SEC. 102. The Congress declares that it is the continuing policy and responsibility of the Federal Government to take appropriate measures to achieve the following goals:

(1) There must be a continuing national investment in science, engineering, and technology adequate to the needs of the Nation.

(2) The level of this investment must be commensurate with national needs and opportunities and the prevalent economic situation.

(3) The Federal Government must promote the effective and efficient utilization in the national interest of the Nation's human resources in sicence, engineering, and technology.

(4) The Nation's capabilities for technology assessment and for technological planning and policy formulation must be strengthened at both Federal and State levels.

(5) The Federal investment in sicence, engineering, and technology must be used to

help meet the priority needs of the Nation, including but not limited to—

(A) maintaining the Nation's strength in basic and applied research and education in science and engineering;

(B) assuring widespread dissemination of scientific, engineering, and technical knowledge;

(C) utilizing science, engineering, and technology in support of the Nation's domestic and foreign policy goals;

(D) promoting the conservation and efficient utilization of the Nation's natural and human resources;

(E) providing for the protection of the oceans and the coastal zones, and the efficient utilization of their resources;

(F) strengthening the economy and promoting full employment through useful technological innovations;

(G) assuring an adequate supply of food, materials, and energy for the Nation's needs;

(H) strengthening the national security;

(I) improving the quality of health care available to all United States citizens;

(J) improving the Nation's transportation and communication services;

(K) increasing the quality of educational opportunities available to all United States citizens;

(L) assuring the provision of effective public services throughout urban, suburban, and rural areas in fields such as public safety, firefighting, and sanitation;

(M) developing high-quality, low-cost housing systems;

(N) eliminating air and water pollution and unnecessary, unhealthful, or ineffective drugs and food additives; and

(O) enhancing the quality of the environment.

DECLARATION OF PURPOSE

SEC. 103. It is declared to be the purpose of this Act to promote the effective application of science, engineering, and technology to the furtherance of national goals by—

(1) establishing, in the Executive Office of the President, an Office of Science, Engineering, and Technology Policy to provide a continuing source of science, engineering, and technology policy analysis and judgment to the President;.

(2) establishing a State and Regional Science, Engineering, and Technology Program to foster the application of science, engineering, and technology to State and regional needs;

(3) establishing an Interagency Federal Coordinating Group on Science, Engineering, and Technology to coordinate agency research and development efforts; and

(4) having the President submit an annual Science, Engineering, and Technology Report to the Congress.

TITLE II—OFFICE OF SCIENCE, ENGINEERING, AND TECHNOLOGY POLICY

ESTABLISHMENT

SEC. 201. There is established in the Executive Office of the President an Office of Science, Engineering, and Technology Policy (hereinafter referred to as the "Office").

DIRECTOR

SEC. 202. (a) The Office shall be administered by a Director who shall be appointed by the President, by and with the advice and consent of the Senate, and who shall be compensated at the rate provided for level II of the Executive Schedule in section 5313 of title 5, United States Code.

(b) The President shall choose a Director from among individuals who (1) by reason of their training, experience, and attainments, are exceptionally qualified to analyze and interpret the implications of scientific, engineering, and technological development and to appraise and recommend programs, policies, and activities of the Federal Government in the light of the policies and priorities set forth in section 102 of this Act; and (2) are sensitive to the economic, social, esthetic, and cultural needs and interests of the Nation.

ASSOCIATE DIRECTORS

SEC. 203. (a) The President is authorized to appoint not to exceed four Associate Directors, by and with the advice and consent of the Senate, and who shall be compensated at a rate not to exceed level III of the Executive Schedule in section 5314 of title 5, United States Code.

(b) Any Associate Director appointed by the President shall be chosen from among individuals who (1) by reason of their training, experience, and attainments, are exceptionally qualified to analyze and interpret the implications of scientific, engineering, and technological development and to appraise and recommend programs, policies, and activities of the Federal Government in the light of the policies and priorities set forth in section 102 of this Act; and (2) are sensitive to the economic, social, esthetic, and cultural needs and interests of the Nation.

(c) Any Associate Director appointed by the President shall perform such functions as the Director may from time to time prescribe.

FEDERAL INVESTMENT AND PRIORITIES

SEC. 204. (a)(1) Within its first year of operation, the Office shall, to the extent practicable, within the limitations of available knowledge and resources, prepare a five-year forecast of estimated levels of Federal investment in science, engineering, and technology in accordance with established national policies and priorities, including those policies and priorities declared in section 102 of this Act.

(2) The forecast shall include estimates, for each year included in the forecast, of the allocation of Federal funds among major expenditure areas in science, engineering, and technology.

(b) The Office shall annually revise the five-year forecast developed under subsection (a) of this section so that it takes appropriate account of changing national needs and circumstances, and extend the forecast so that it always extends five years into the future.

(c) The Office shall annually appraise progress in science, engineering, and technology in relation to the needs of the Nation and the five-year forecasts developed under subsections (a) and (b) of this section and shall estimate a range of options for various levels of Federal investment in science, engineering, and technology for the fiscal year immediately following the fiscal year in which such estimates are made, including among the options that level of Federal investment which would assure optimum utilization of the Nation's science, engineering, and technology resources.

(d) The Office shall annually assess alternative uses of Federal funds for science, engineering, and technology in relation to scientific, engineering, and technical opportunities and national needs and the five-year forecasts developed under subsections (a) and (b) of this section, and on the basis thereof shall prepare a range of priority options for allocating Federal funds among major expenditure areas in science, engineering, and technology, which pertain to the fiscal year immediately following the fiscal year in which such priorities are prepared.

(e) The Director shall furnish the options prepared under subsections (c) and (d) of this section, together with necessary supporting analyses and data, to the Office of Management and Budget for use in developing budget recommendations to the President.

POLICY PLANNING, ANALYSIS, AND ADVICE

SEC. 205. The Office shall serve as a source of scientific, engineering, and technological analysis and judgment for the President with respect to major policies, plans, and programs of the Federal Government. In carrying out this function, the Director shall—

(1) seek to define coherent approaches for applying science, engineering, and technology to critical and emerging national and interational problems and for promoting coordination of the scientific, engineering, and technological responsibilities and programs of the Federal departments and agencies in the resolution of such problems;

(2) assist and advise the President in the preparation of the Science, Engineering, and Technology Report, in accordance with section 208 of this Act;

(3) gather timely and authoritative information concerning significant developments and trends in science, engineering, technology, and in national priorities, both current and prospective, to analyze and interpret such information for the purpose of determining whether such developments and trends are likely to affect achievement of the priority needs set forth in section 102 (5) of this Act;

(4) encourage the development and maintenance of an adequate data base for human resources in science, engineering, and technology, including the development of appropriate models to forecast future manpower requirements, and assess the impact of major governmental and public programs on human resources and their utilization;

(5) initiate studies and analyses, including systems analyses and technology assessments, of alternatives available for the resolution of critical and emerging national and international problems amenable to the contributions of science, engineering, and technology and, insofar as possible, determine and compare probable costs, benefits, and impacts of such alternatives;

(6) advise the President on the extent to which the various scientific and technical programs, policies, and activities of the Federal Government are likely to affect the achievement of the priority needs of the Nation as set forth in section 102(5) of this Act;

(7) provide the President with periodic reviews of Federal statutes and administrative regulations of the various departments and agencies which affect research and development activities, both internally and in relation to the private sector, or which may interfere with desirable technological innovation, together with recommendations for the elimination, reform, or updating, as appropriate, of such statutes and regulations;

(8) develop, review, revise, and recommend criteria for determining scientific, engineering, and technological activities warranting Federal support, and recommend Federal policies designed to advance (A) the development and maintenance of broadly based scientific, engineering, and technological capabilities, including human resources, at all levels of government, academia, and industry, and (B) the effective application of such capabilities to national needs;

(9) assess and advise on policies for international cooperation in science, engineering, and technology which will advance the national and international objectives of the United States;

(10) identify and assess emerging and future areas in which science, engineering,

and technology can be used effectively in addressing national and international problems;

(11) report at least once each year to the President on the overall activities and accomplishments of the Office, pursuant to section 208 of this Act; and

(12) perform such other duties and functions and make and furnish such studies and reports thereon, and recommendations with respect to matters of policy and legislation as the President may request.

ADDITIONAL FUNCTIONS OF THE DIRECTOR

SEC. 206. (a) The Director shall, in addition to the other duties and functions set forth in this title—

(1) serve as Chairman of the Federal Coordinating Group of Science, Engineering, and Technology established under title IV;

(2) serve as a member of the Domestic Council; and

(3) serve as a member of the Intergovernmental Science, Engineering, and Technology Advisory Panel established under title V of this Act.

(b) For the purpose of assuring the optimum contribution of science, engineering, and technology to the national security, the Director, at the request of the National Security Council, shall advise the National Security Council in such matters concerning science, engineering, and technology as relate to national security.

(c) The Director, in order to fulfill his functions under this title, is authorized to—

(1) appoint, assign the duties, and fix the compensation of personnel without regard to the provisions of title 5, United States Code, governing appointments in the competitive service, and without regard to the provisions of chapter 51 and subchapter III of chapter 53 of such title, relating to classification and General Schedule pay rates, at rates not in excess of the rate prescribed for GS–18 of the General Schedule under section 5332 of such title; and

(2) enter into contracts and other arrangements for studies, analyses, and other services with public agencies and with private persons, organizations, or institutions, and make such payments as he deems necessary to carry out the provisions of this Act without legal consideration, without performance bonds, and without regard to section 3709 of the Revised Statutes (41 U.S.C. 5).

COORDINATION WITH OTHER ORGANIZATIONS

SEC. 207. (a) In exercising his functions under this title, the Director shall—

(1) work in close consultation and cooperation with the Domestic Council, the National Security Council, the Council on Environmental Quality, the Council of Economic Advisers, the Office of Management and Budget, and the Federal departments and agencies;

(2) utilize the services of consultants, establish such advisory panels, and, to the extent practicable, consult with State and local governmental agencies, with appropriate professional groups, and with such representatives of industry, the universities, agriculture, labor, consumers, conservation organizations, and such other public interest groups, organizations, and individuals as he deems advisable;

(3) hold such hearings in various parts of the Nation as he deems necessary, to determine the views of the agencies, groups, and organizations referred to in paragraph (2) of this subsection and of the general public, concerning national needs and trends in science, engineering, and technology; and

(4) utilize with their consent to the fullest extent possible the services, personnel, equipment, facilities, and information (including statistical information) of public and private agencies and organizations, and individuals, in order to avoid duplication of effort and expense, and may transfer funds made available pursuant to this act to other Federal agencies as reimbursement for the utilization of such personnel, services, facilities, equipment, and information.

(b) Each department, agency, and instrumentality of the Executive Branch of the Government, including any independent agency, is authorized to furnish the Director such information as the Director deems necessary to carry out his functions under this title.

(c) Upon request, the Administrator of the National Aeronautics and Space Administration is authorized to assist the Director with respect to carrying out his activities conducted under paragraph (5) of section 205 of this Act.

SCIENCE, ENGINEERING, AND TECHNOLOGY REPORT

SEC. 208. (a) The President shall transmit annually to the Congress, beginning February 15, 1977, a Science, Engineering, and Technology Report (hereinafter referred to as the "Report") which shall be prepared by the Office, with appropriate assistance from the departments and agencies and such consultants and contractors as the Director deems necessary. The report shall include the estimates on Federal investment level and proposed priorities in science, engineering, and technology, prepared by the Director pursuant to section 204 of this Act, and to the extent practicable, within the limitations of available knowledge and resources, include such issues as—

(1) a review of developments of national significance in science, engineering, and technology;

(2) the significant effects of current and

projected trends in science, engineering, and technology on the social, economic, and other requirements of the Nation;

(3) a review and appraisal of selected science-, engineering-, and technology-related programs, policies, and activities of the Federal Government;

(4) an inventory and forecast of critical and emerging national problems the resolution of which might be substantially assisted by the application of science, engineering, and technology;

(5) the identification and assessment of scientific, engineering, and technological measures that can contribute to the resolution of such problems, in light of the related social, economic, political, and institutional considerations;

(6) the existing and projected scientific, engineering, and technological resources, including specialized manpower, that could contribute to the resolution of such problems; and

(7) recommendations for legislation on science-, engineering-, and technology-related programs and policies that will contribute to the resolution of such problems.

(b) In preparing the Report under subsection (a) of this section, the Office shall make maximum use of relevant data available from the National Science Foundation and other government departments and agencies.

(c) The Director shall insure that the Report, in the form approved by the President, is printed and made available as a public document.

TITLE III—PRESIDENT'S ADVISORY COMMITTEE ON SCIENCE, ENGINEERING, AND TECHNOLOGY

ESTABLISHMENT

SEC. 301. The President is authorized to establish within the Executive Office of the President a President's Advisory Committee on Science, Engineering, and Technology (hereinafter referred to as the "Committee").

MEMBERSHIP

SEC. 302. (a) The Committee shall consist of—

(1) the Director of the Office of Science, Engineering, and Technology Policy established under title II of this Act; and

(2) not less than eight nor more than fourteen other members appointed by the President.

(b) Members of the Committee appointed by the President pursuant to subsection (a) (1) of this section shall—

(1) be exceptionally qualified and distinguished in science, engineering, technology, information dissemination, education, management, labor, or public affairs;

(2) be highly capable of critically assessing the policies, priorities, programs, and activities of the Nation, with respect to the findings, policies, and purposes set forth in title I; and

(3) shall collectively constitute a balanced composition with respect to (A) fields of science and engineering, (B) academic, industrial, and government experience, and (C) business, labor, consumer, and public interest points of view.

(c) The President shall appoint one member of the Committee to serve as Chairman and another member to serve as Vice Chairman for such periods as the President may determine.

(d) Each member of the Committee who is not an officer of the Federal Government shall, while serving on business of the Committee, be entitled to receive compensation at a rate not to exceed the daily rate prescribed for GS–18 of the General Schedule under section 5332 of title 5, United States Code, including traveltime, and while so serving away from his home or regular place of business he may be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as the expenses authorized by section 5703(b) of title 5, United States Code, for persons in Government service employed intermittently.

FEDERAL SCIENCE, ENGINEERING, AND TECHNOLOGY SURVEY

SEC. 303. (a) The Committee shall survey, examine, and analyze the overall context of the Federal science, engineering, and technology effort including missions, goals, personnel, funding, organization, facilities, and activities in general, taking adequate account of the interests of individuals and groups that may be affected by Federal scientific, engineering, and technical programs, including, as appropriate, consultation with such individuals and groups. In carrying out its functions under this section, the Committee shall consider needs for—

(1) the establishment of such new departments, agencies, offices, or other organizations as may serve to strengthen the Nation's scientific, engineering, and technical capabilities and increase the effectiveness of their application to the solution of national problems;

(2) improvements in existing systems for handling scientific, engineering, and technical information on a Government-wide basis, including consideration of the appropriate role to be played by the private sector in the dissemination of such information;

(3) improved technology assessment in the executive branch of the Federal Government;

(4) improved methods for effecting technology innnovation, transfer, and use;

(5) stimulating more effective Federal-State and Federal-industry liaison and cooperation in science, engineering, and technology;

(6) reduction and simplification of Federal regulations and administrative practices and procedures which may have the effect of retarding technological innovation or opportunities for its utilization;

(7) a broader base for support of basic research;

(8) ways of strengthening the Nation's academic institutions' capabilities for research and education in science, engineering, and technology;

(9) ways and means of effectively integrating scientific, engineering, and technological factors into our national and international policies;

(10) technology designed to meet community and individual needs;

(11) maintenance of adequate scientific, engineering, and technological manpower with regard to both quality and quantity;

(12) improved systems for planning and analysis of the Federal science, engineering, and technology programs; and

(13) long-range study, analysis, and planning in regard to the application of science, engineering, and technology to major national problems or concerns.

(b)(1) Within one year of the appointment of a majority of its members, the Committee shall submit a report to the President of its activities, findings, conclusions, and recommendations including such supporting data and material as may be necessary.

(2) After appropriate review of the report submitted under paragraph (1) of this subsection, the President shall transmit the report to the Congress, together with any recommendations he may wish to make concerning its findings.

CONTINUATION OF COMMITTEE

SEC. 304. (a) Ninety days after transmission of the report prepared under section 303, the Committee shall cease to exist, unless the President, before the expiration of the ninety-day period, makes a determination that it is advantageous for the Committee to continue in being.

(b) If the President determines that it is advantageous for the Committee to continue in being, (1) the Committee shall continue in being and shall exercise such functions as are prescribed by the President; and (2) the members of the Committee shall serve at the pleasure of the President.

STAFF AND CONSULTANT SUPPORT

SEC. 305. (a) In the performance of its functions under sections 303 and 304, the Committee is authorized—

(1) to select, appoint, employ, and fix the compensation of such specialists and other experts as may be necessary for the carrying out of its functions under this Act, in accordance with section 3109 of title 5, United States Code (but without regard to the last sentence thereof);

(2) to appoint, assign the duties, and fix the compensation of personnel without regard to the provisions of title 5, United States Code, governng appointments in the competitive service, and without regard to the provisions of chapter 51 and subchapter III of chapter 53 of such title, relating to classification and General Schedule pay rates, at rates not in excess of the rate prescribed for GS–18 of the General Schedule under section 5332 of such title; and

(3) to provide for the participation of such civilian and military personnel as may be detailed to the Committee pursuant to subsection (b) of this section for carrying out the functions of the Committee.

(b) Upon request of the Committee, the head of any Federal department, agency, or instrumentality is authorized (1) to furnish to the Committee such information as may be necessary for carrying out its functions and as may be available to or procurable by such department, agency, or instrumentality, and (2) to detail to temporary duty with the Committee on a reimbursable basis such personnel within ihs administrative jurisdiction as it may need or believe to be useful for carrying out its functions. Each such detail shall be without loss of seniority, pay, or other employee status, to civilian employees so detailed, and without loss of status, rank, office, or grade, or of any emolument, perquisite, right, privilege or benefit incident thereto to military personnel so detailed. Each such detail shall be made pursuant to an agreement between the Chairman and the head of the relevant department, agency, or instrumentality, and shall be in accordance with the provisons of subchapter III of chapter 33, title 5, United States Code.

TITLE IV—FEDERAL COORDINATING GROUP FOR SCIENCE, ENGINEERING, AND TECHNOLOGY

ESTABLISHMENT AND FUNCTIONS

SEC. 401. (a) There is established the Federal Coordinating Group for Science, Engineering, and Technology (hereinafter referred to as the "Group").

(b) The Group shall be composed of the Director of the Office of Science, Engineering, and Technology Policy and one representative of each of the following Federal agencies: Department of Agriculture, Department of Commerce, Department of Defense, Department of Health, Education, and

Welfare, Department of Housing and Urban Development, Department of the Interior, Department of State, Department of Transportation, Veterans' Administration, Nuclear Regulatory Commission, National Aeronautics and Space Administration, National Oceanic and Atmospheric Administration, National Science Foundation, Environmental Protection Agency, and Energy Research and Development Administration. Each such representative shall be an official of policy rank designated by the head of the Federal agency concerned.

(c) The Director of the Office of Science, Engineering, and Technology Policy shall serve as Chairman of the Group. The Chairman may make provision for another member of the Group to act temporarily in the Chairman's absence as Chairman of the Group.

(d) The Chairman may (1) request the head of any Federal agency not named in subsection (b) of this section to designate a representative to participate in meetings or parts of meetings of the Group concerned with matters of substantial interest to such agency, and (2) invite other persons to attend meetings of the Group.

(e) The Group shall consider problems and developments in the fields of science, enginering, and technology and related activities affecting more than one Federal agency, and shall recommend policies and other measures designed to—

(1) provide more effective planning and administration of Federal scientific, engineering, and technological programs,

(2) identify research needs including areas of research requiring additional emphasis,

(3) achieve more effective utilization of the scientific, engineering, and technological resources and facilities of Federal agencies, including the elimination of unnecessary duplication, and

(4) further international cooperation in science, engineering, and technology.

(f) The Group shall perform such other related advisory duties as shall be assigned by the President or by the Chairman.

(g) For the purpose of carrying out the provisions of this section, each Federal agency represented on the Group shall furnish necessary assistance to the Group. Such assistance may include—

(1) detailing employees to the Group to perform such functions, consistent with the purposes of this section, as the Chairman may assign to them, and

(2) undertaking, upon request of the Chairman, such special studies for the Group as come within the functions herein assigned to the Group.

(h) For the purpose of conducting studies and making reports as directed by the Chairman, standing subcommittees and panels of the Group may be established.

ABOLITION OF FEDERAL COUNCIL FOR SCIENCE AND TECHNOLOGY

SEC. 402. The Federal Council for Science and Technology, established pursuant to Executive Order 10807, issued March 13, 1959, as amended by Executive Order 11381, issued November 8, 1967, is hereby abolished.

TITLE V—STATE AND REGIONAL SCIENCE AND TECHNOLOGY PROGRAM

ESTABLISHMENT OF INTERGOVERNMENTAL SCIENCE, ENGINEERING, AND TECHNOLOGY ADVISORY PANEL

SEC. 501. (a) There is established within the Office an Intergovernmental Science, Engineering, and Technology Advisory Panel (hereinafter referred to as the "Panel").

(b) The Panel shall be composed of members as follows:

(1) One member from each State, to be appointed by the Governor of that State.

(2) The Director of the National Science Foundation or his representative.

(3) The Director or his representative.

In making appointments under this subsection, the Governor of each State shall appoint individuals who are familiar with State and local needs, who would be effective in serving as a liaison between the State and the Federal Government, and, to the extent practicable, are familiar with science, engineering, and technology issues.

(c) Each appointed member of the Panel shall, while serving on business of the Panel, be entitled to receive compensation at a rate not to exceed the daily rate prescribed for GS–18 of the General Schedule under section 5332 of title V, United States Code, including traveltime, and while so serving away from his home or regular place of business, he may be allowed travel expenses, including per diem in lieu of subsistence in the same manner as the expenses authorized by section 5703(b) of title V, United States Code, for persons in Government service employed intermittently.

(d) The Director, or his representative, shall serve as Chairman of the Panel.

(e) The Panel shall perform such functions as the Chairman may prescribe, and shall meet at the call of the Chairman.

FUNCTIONS OF THE PANEL

SEC. 502. (a) The Panel shall advise and assist the Director in—

(1) identifying and defining civilian problems at the State, regional, and local levels to whose solution or amelioration the application of science, engineering, and technology may contribute;

(2) establishing priorities for addressing the problems identified in paragraph (1); and

(3) identifying and fostering ways to facilitate the transfer and utilization of results of Federal research and development activities so as to maximize their application to civilian needs.

GRANTS FOR STATE SCIENCE, ENGINEERING, AND TECHNOLOGY ADVISORY PROGRAMS

SEC. 503 (a) From funds authorized under section 602 of this title, the Director of the National Science Foundation, after consultation with the Panel, is authorized to make grants of not to exceed $200,000 to any State to pay a part of the costs of establishing or strengthening offices of State science, engineering, and technology within the executive and legislative branches of the State government.

(b) The purpose of any such office shall be to promote the wise application of science, engineering, and technology to meeting the needs of the State and its political subdivisions, by providing assistance and advice to the Governor or the legislature of such State, as appropriate.

(c) No grant authorized under this section for the establishment or strengthening of an office of State science, engineering, and technology may exceed $100,000.

(d) No grant may be authorized under this section unless an application is submitted at such time, in such manner, and containing or accompanied by such information as the Director of the National Science Foundation shall require. Each such application shall contain provisions to assure that—

(1) the office for which assistance is sought under the application will (A) be headed by an official who, by reason of education and experience, is qualified to advise the Governor or legislature of a State, as appropriate, on the application of science, engineering, and technology to meeting the needs of the State and its political subdivisions, and (B) have sufficient authority, consistent with State law, to carry out any functions assigned to that office pursuant to this title; and

(2) it is the applicant's stated intention that the State will assume the costs of any office established or strengthened pursuant to this title not later than two years after the year in which the grant is made.

(e) The Director of the National Science Foundation shall approve any application which meets requirements of subsection (d) of this section, and shall not disapprove any application without affording an opportunity for a hearing.

(f) (1) The Director of the National Science Foundation shall pay to each State having an application approved under subsection (e) of this section the Federal share of the cost of that application.

(2) For each fiscal year the Federal share shall be 80 per centum.

(3) Any application submitted pursuant to this section shall not be funded unless such application is submitted to the Director of the National Science Foundation prior to thirty-six months after the date of enactment of this Act.

TITLE VI—GENERAL PROVISIONS

DEFINITIONS

SEC. 601. As used in this Act:

(1) The term "Office" means the Office of Science, Engineering, and Technology Policy.

(2) The term "Director" means the Director of the Office of Science, Engineering, and Technology Policy.

(3) The term "Committee" means the President's advisory Committee on Science, Engineering, and Technology.

(4) The term "Group" means the Federal Coordinating Group for Science, Engineering, and Technology.

(5) The term "Panel" means the Intergovernmental Science, Engineering, and Technology Advisory Panel.

(6) The term "Foundation" means the National Science Foundation.

(7) The term "State" means each of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Trust Territory of the Pacific Islands.

AUTHORIZATION OF APPROPRIATIONS

SEC. 602. (a) There are authorized to be appropriated $4,000,000 for the fiscal year 1976, of which $1,000,000 shall be available to carry out the provisions of title II, $1,000,000 shall be available to carry out the provisions of title III, and $2,000,000 shall be available to carry out the provisions of title V; $1,500,000 for the period beginning July 1, 1976, and ending September 30, 1976, of which $250,000 shall be available to carry out the provisions of title II, $250,000 shall be available to carry out the provisions of title III, and $1,000,000 shall be available to carry out the provisions of title V; and $12,000,000 for the fiscal year 1977, of which $3,000,000 shall be available to carry out the provisions of title II, $1,000,000 shall be available to carry out the provisions of title III, and $8,000,000 shall be available to carry out the provisions of title V.

(b) Funds appropriated pursuant to subsection (a) of this section shall remain available for obligation, for expenditure, or for obligation and expenditure, for such period or periods as may be specified in Acts making such appropriations.

REPEALER

SEC. 603. Sections 1, 2, 3, and 4 of Reorganization Plan Numbered 2 of 1962 (76 Stat. 1253) and section 2 of Reorganization Plan Numbered 1 of 1973 (87 Stat. 1089) are repealed.

we battling with that deficit shown on page 5 of the committee report?

Mr. MOSS. The Senator in reading from the report restates some of the findings we made. That is true. We found out that there was a serious problem there of underfunding that caused them to neglect some of the management that they should be offering.

No, the rehabilitation of buildings should not take any precedence over keeping the dike in repair. Both should be done. We are trying to help them remedy this budgetary shortfall which let the service deteriorate to some degree.

Mr. TAFT. I will be glad to cooperate with the chairman to try to bring about that end in any way we can. As I say, we may well have to go to the supplemental route if we cannot find discretionary funds. But it would seem to me the authority must exist already, and I wonder if the chairman would confirm that, to make repairs of that kind. I would think that there ought to be general discretion upon the Secretary or somebody which could be used for that particular kind of purpose.

Mr. MOSS. I would agree this is an oligation that needs to be filled. I am not sure whether discretionary funds are available. If they are not available, I would be glad to support a supplemental appropriaiton to get over this problem that we have with Fish and Wildlife at this point.

I am glad to have this brought to our attention, because I think it is serious enough that we need to move right away.

Mr. TAFT. I appreciate the remarks of the distinguished chairman, and thank him very much.

Mr. PACKWOOD. Mr. President, I am extremely pleased that today the Senate will pass the National Wildlife Refuge System Act, H.R. 5512. The bill before us is one which Senator METCALF and I introduced last year in the Senate, S. 1293, and have worked aggressively to see enacted.

With passage of this bill today, the Congress has virtually completed its work to insure that the land within the National Wildlife Refuge System is managed for the protection and enhancement of the wildlife habitats by the Fish and Wildlife Service. It is worth noting that the House of Representatives passed H.R. 5512 last November by a record vote of 341 to 10. It is this type of unsurpassed support which affirms the need to carry forth this legislation into law this year. This bill will insure that neither administrative action, nor Executive order, could revoke, modify or transfer management of these vital refuges to agencies other than the Fish and Wildlife Service. Moreover, by placing the Fish and Wildlife Service in the Service in the position of sole managers of the Wildlife Refuge System, duplication in the administration of these lands will be prevented. If certain refuges were parcelled out to other agencies than the Fish and Wildlife Service, then those agencies would have to manage their part of these lands separately, and seek a separate budget allocation for that purpose.

Since I have joined in introducing this legislation last March 22, 1975, the Congress has come a long way in realizing the importance of protecting the wildlife in the National Wildlife Refuge System. The Fish and Wildlife Service is ably prepared to protect the wildlife and natural values of these refuges. Now that the Senate is taking its half of the congressional step toward making this bill a matter of law, I want to reaffirm my support and offer my thanks to all those who have worked over the last year to see this bill enacted.

Mr. MOSS. Mr. President, I do not know of any other amendments. Therefore, I suggest a third reading.

The PRESIDING OFFICER. The bill is open to further amendment. If there be no further amendment to be proposed, the question is on the engrossment of the amendment and the third reading of the bill.

The amendment was ordered to be engrossed, and the bill to be read a third time.

The bill was read the third time.

Mr. MOSS. Mr. President, I think a voice vote will be satisfactory on this measure.

The PRESIDING OFFICER. The question is, Shall the bill pass?

The bill (H.R. 5512) was passed.

ORDER FOR RECOGNITION OF SENATORS KENNEDY AND CHURCH TOMORROW

Mr. ROBERT C. BYRD. Mr. President, I ask unanimous consent that after the two leaders or their designees have been recognized under the standing order tomorrow, the Senator from Massachusetts (Mr. KENNEDY) and the Senator from Idaho (Mr. CHURCH) be recognized, each for not to exceed 15 minutes.

The PRESIDING OFFICER. Without objection, it is so ordered.

ORDER FOR RECOGNITION OF SENATOR EAGLETON TOMORROW

Mr. ROBERT C. BYRD. I ask unanimous consent that after the order for recognition of Mr. MANSFIELD tomorrow, which has already been entered, the Senator from Missouri (Mr. EAGLETON) be recognized for not to exceed 15 minutes.

The PRESIDING OFFICER. Without objection, it is so ordered.

NATIONAL POLICY, ORGANIZATION, AND PRIORITIES FOR SCIENCE, ENGINEERING, AND TECHNOLOGY ACT OF 1976

Mr. ROBERT C. BYRD. Mr. President, the following request has been cleared on both sides of the aisle.

I ask unanimous consent that the Senate proceed to the immediate consideration of Calendar Order No. 596, S. 32.

The PRESIDING OFFICER. The bill will be stated by title.

The assistant legislative clerk read as follows:

A bill (S. 32) to establish a framework for the formulation of national policy and priorities for science and technology, and for other purposes.

The PRESIDING OFFICER. Is there objection?

There being no objection, the Senate proceeded to consider the bill, which had been reported from the Committee on Labor and Public Welfare, the Committee on Commerce, and the Committee on Aeronautical and Space Sciences, with an amendment to strike out all after the enactment clause and insert the following:

That this Act may be cited as the "National Policy, Organization, and Priorities for Science, Engineering, and Technology Act of 1976".

TITLE I—NATIONAL SCIENCE, ENGINEERING, AND TECHNOLOGY POLICY AND PRIORITIES

FINDINGS

SEC. 101. The Congress, recognizing the profound impact of science, engineering, and technology on society, and the interrelations of scientific, engineering, technological, economic, social, political, international, and institutional factors, hereby finds that—

(1) Federal funding for science, engineering, and technology represents an investment in the future which is indispensable to sustained national progress and human betterment;

(2) the manpower pool of scientists, engineers, and technicians constitutes an invaluable national resource which should be utilized to the fullest extent possible;

(3) the scientific, engineering, and technological capabilities within the United States, when properly fostered, applied, and directed, can effectively assist in improving the quality of life, in anticipating and resolving many critical and emerging international, national, and local problems, in strengthening America's international economic competitive position, and in furthering the Nation's foreign policy objectives;

(4) strong participation by State and local governments is essential to the successful solution of many civilian problems, and in developing programs for the application of science, engineering, and technology to civilian needs and to setting priorities for civilian research and development activities;

(5) the widespread influence of technology in society requires sound planning and management to meet human needs;

(6) the maintenance and strengthening of diversified scientific, engineering, and technological capabilities in government, industry, and the universities, and the encouragement of independent initiatives based on such capabilities, are essential to the most effective use of science, engineering, and technology in resolving critical and emerging national problems;

(7) a systematic approach is needed to identify and anticipate critical and emerging national problems and to analyze, plan, and coordinate Federal science, engineering, and technology programs, policies, and activities intended to contribute to the resolution of such problems, including long-range, inclusive planning as well as intermediate and short-range program development; and

(8) the effectiveness of scientific, engineering, and technological contributions to the achievement of national goals depends on the maintenance of a strong base of knowledge in science, engineering, and advanced technology together with a resource of highly qualified scientists and engineers.

DECLARATION OF POLICIES AND PRIORITIES

SEC. 102. The Congress declares that it is the continuing policy and responsibility of

the Federal Government to take appropriate measures to achieve the following goals:

(1) There must be a continuing national investment in science, engineering, and technology adequate to the needs of the Nation.

(2) The level of this investment must be commensurate with national needs and opportunities and the prevalent economic situation.

(3) The Federal Government must promote the effective and efficient utilization in the national interest of the Nation's human resources in sicence, engineering, and technology.

(4) The Nation's capabilities for technology assessment and for technological planning and policy formulation must be strengthened at both Federal and State levels.

(5) The Federal investment in sicence, engineering, and technology must be used to help meet the priority needs of the Nation, including but not limited to—

(A) maintaining the Nation's strength in basic and applied research and education in science and engineering;

(B) assuring widespread dissemination of scientific, engineering, and technical knowledge;

(C) utilizing science, engineering, and technology in support of the Nation's domestic and foreign policy goals;

(D) promoting the conservation and efficient utilization of the Nation's natural and human resources;

(E) providing for the protection of the oceans and the coastal zones, and the efficient utilization of their resources;

(F) strengthening the economy and promoting full employment through useful technological innovations;

(G) assuring an adequate supply of food, materials, and energy for the Nation's needs;

(H) strengthening the national security;

(I) improving the quality of health care available to all United States citizens;

(J) improving the Nation's transportation and communication services;

(K) increasing the quality of educational opportunities available to all United States citizens;

(L) assuring the provision of effective public services throughout urban, suburban, and rural areas in fields such as public safety, firefighting, and sanitation;

(M) developing high-quality, low-cost housing systems;

(N) eliminating air and water pollution and unnecessary, unhealthful, or ineffective drugs and food additives; and

(O) enhancing the quality of the environment.

DECLARATION OF PURPOSE

SEC. 103. It is declared to be the purpose of this Act to promote the effective application of science, engineering, and technology to the furtherance of national goals by—

(1) establishing, in the Executive Office of the President, an Office of Science, Engineering, and Technology Policy to provide a continuing source of science, engineering, and technology policy analysis and judgment to the President;

(2) establishing a State and Regional Science, Engineering, and Technology Program to foster the application of science, engineering, and technology to State and regional needs;

(3) establishing an Interagency Federal Coordinating Group on Science, Engineering, and Technology to coordinate agency research and development efforts; and

(4) having the President submit an annual Science, Engineering, and Technology Report to the Congress.

TITLE II—OFFICE OF SCIENCE, ENGINEERING, AND TECHNOLOGY POLICY

ESTABLISHMENT

SEC. 201. There is established in the Executive Office of the President an Office of Science, Engineering, and Technology Policy (hereinafter referred to as the "Office").

DIRECTOR

SEC. 202. (a) The Office shall be administered by a Director who shall be appointed by the President, by and with the advice and consent of the Senate, and who shall be compensated at the rate provided for level II of the Executive Schedule in section 5313 of title 5, United States Code.

(b) The President shall choose a Director from among individuals who (1) by reason of their training, experience, and attainments, are exceptionally qualified to analyze and interpret the implications of scientific, engineering, and technological development and to appraise and recommend programs, policies, and activities of the Federal Government in the light of the policies and priorities set forth in section 102 of this Act; and (2) are sensitive to the economic, social, esthetic, and cultural needs and interests of the Nation.

ASSOCIATE DIRECTORS

SEC. 203. (a) The President is authorized to appoint not to exceed four Associate Directors, by and with the advice and consent of the Senate, and who shall be compensated at a rate not to exceed level III of the Executive Schedule in section 5314 of title 5, United States Code.

(b) Any Associate Director appointed by the President shall be chosen from among individuals who (1) by reason of their training, experience, and attainments, are exceptionally qualified to analyze and interpret the implications of scientific, engineering, and technological development and to appraise and recommend programs, policies, and activities of the Federal Government in the light of the policies and priorities set forth in section 102 of this Act; and (2) are sensitive to the economic, social, esthetic, and cultural needs and interests of the Nation.

(c) Any Associate Director appointed by the President shall perform such functions as the Director may from time to time prescribe.

FEDERAL INVESTMENT AND PRIORITIES

SEC. 204. (a)(1) Within its first year of operation, the Office shall, to the extent practicable, within the limitations of available knowledge and resources, prepare a five-year forecast of estimated levels of Federal investment in science, engineering, and technology in accordance with established national policies and priorities, including those policies and priorities declared in section 102 of this Act.

(2) The forecast shall include estimates, for each year included in the forecast, of the allocation of Federal funds among major expenditure areas in science, engineering, and technology.

(b) The Office shall annually revise the five-year forecast developed under subsection (a) of this section so that it takes appropriate account of changing national needs and circumstances, and extend the forecast so that it always extends five years into the future.

(c) The Office shall annually appraise progress in science, engineering, and technology in relation to the needs of the Nation and the five-year forecasts developed under subsections (a) and (b) of this section and shall estimate a range of options for various levels of Federal investment in science, engineering, and technology for the fiscal year immediately following the fiscal year in which such estimates are made, including among the options that level of Federal investment which would assure optimum utilization of the Nation's science, engineering, and technology resources.

(d) The Office shall annually assess alternative uses of Federal funds for science, engineering, and technology in relation to scientific, engineering, and technical opportunities and national needs and the five-year forecasts developed under subsections (a) and (b) of this section, and on the basis thereof shall prepare a range of priority options for allocating Federal funds among major expenditure areas in science, engineering, and technology, which pertain to the fiscal year immediately following the fiscal year in which such priorities are prepared.

(e) The Director shall furnish the options prepared under subsections (c) and (d) of this section, together with necessary supporting analyses and data, to the Office of Management and Budget for use in developing budget recommendations to the President.

POLICY PLANNING, ANALYSIS, AND ADVICE

SEC. 205. The Office shall serve as a source of scientific, engineering, and technological analysis and judgment for the President with respect to major policies, plans, and programs of the Federal Government. In carrying out this function, the Director shall—

(1) seek to define coherent approaches for applying science, engineering, and technology to critical and emerging national and international problems and for promoting coordination of the scientific, engineering, and technological responsibilities and programs of the Federal departments and agencies in the resolution of such problems;

(2) assist and advise the President in the preparation of the Science, Engineering, and Technology Report, in accordance with section 208 of this Act;

(3) gather timely and authoritative information concerning significant developments and trends in science, engineering, technology, and in national priorities, both current and prospective, to analyze and interpret such information for the purpose of determining whether such developments and trends are likely to affect achievement of the priority needs set forth in section 102(5) of this Act;

(4) encourage the development and maintenance of an adequate data base for human resources in science, engineering, and technology, including the development of appropriate models to forecast future manpower requirements, and assess the impact of major governmental and public programs on human resources and their utilization;

(5) initiate studies and analyses, including systems analyses and technology assessments, of alternatives available for the resolution of critical and emerging national and international problems amenable to the contributions of science, engineering, and technology and, insofar as possible, determine and compare probable costs, benefits, and impacts of such alternatives;

(6) advise the President on the extent to which the various scientific and technical programs, policies, and activities of the Federal Government are likely to affect the achievement of the priority needs of the Nation as set forth in section 102(5) of this Act;

(7) provide the President with periodic reviews of Federal statutes and administrative regulations of the various departments and agencies which affect research and development activities, both internally and in relation to the private sector, or which may interfere with desirable technological innovation, together with recommendations for the elimination, reform, or updating, as appropriate, of such statutes and regulations;

(8) develop, review, revise, and recommend criteria for determining scientific, engineering, and technological activities warranting Federal support, and recommend Federal policies designed to advance (A) the development and maintenance of broadly based scientific, engineering, and technological capabilities, including human resources, at all levels of government, academia, and industry, and (B) the effective application of such capabilities to national needs;

(9) assess and advise on policies for international cooperation in science, engineering, and technology which will advance the national and international objectives of the United States;

(10) identify and assess emerging and future areas in which science, engineering, and technology can be used effectively in addressing national and international problems;

(11) report at least once each year to the President on the overall activities and accomplishments of the Office, pursuant to section 208 of this Act; and

(12) perform such other duties and functions and make and furnish such studies and reports thereon, and recommendations with respect to matters of policy and legislation as the President may request.

ADDITIONAL FUNCTIONS OF THE DIRECTOR

SEC. 206. (a) The Director shall, in addition to the other duties and functions set forth in this title—

(1) serve as Chairman of the Federal Coordinating Group of Science, Engineering, and Technology established under title IV;

(2) serve as a member of the Domestic Council; and

(3) serve as a member of the Intergovernmental Science, Engineering, and Technology Advisory Panel established under title V of this Act.

(b) For the purpose of assuring the optimum contribution of science, engineering, and technology to the national security, the Director, at the request of the National Security Council, shall advise the National Security Council in such matters concerning science, engineering, and technology as relate to national security.

(c) The Director, in order to fulfill his functions under this title, is authorized to—

(1) appoint, assign the duties, and fix the compensation of personnel without regard to the provisions of title 5, United States Code, governing appointments in the competitive service, and without regard to the provisions of chapter 51 and subchapter III of chapter 53 of such title, relating to classification and General Schedule pay rates, at rates not in excess of the rate prescribed for GS–18 of the General Schedule under section 5332 of such title; and

(2) enter into contracts and other arrangements for studies, analyses, and other services with public agencies and with private persons, organizations, or institutions, and make such payments as he deems necessary to carry out the provisions of this Act without legal consideration, without performance bonds, and without regard to section 3709 of the Revised Statutes (41 U.S.C. 5).

COORDINATION WITH OTHER ORGANIZATIONS

SEC. 207. (a) In exercising his functions under this title, the Director shall—

(1) work in close consultation and cooperation with the Domestic Council, the National Security Council, the Council on Environmental Quality, the Council of Economic Advisers, the Office of Management and Budget, and the Federal departments and agencies;

(2) utilize the services of consultants, establish such advisory panels, and, to the extent practicable, consult with State and local governmental agencies, with appropriate professional groups, and with such representatives of industry, the universities, agriculture, labor, consumers, conservation organizations, and such other public interest groups, organizations, and individuals as he deems advisable;

(3) hold such hearings in various parts of the Nation as he deems necessary, to determine the views of the agencies, groups, and organizations referred to in paragraph (2) of this subsection and of the general public, concerning national needs and trends in science, engineering, and technology; and

(4) utilize with their consent to the fullest extent possible the services, personnel, equipment, facilities, and information (including statistical information) of public and private agencies and organizations, and individuals, in order to avoid duplication of effort and expense, and may transfer funds made available pursuant to this act to other Federal agencies as reimbursement for the utilization of such personnel, services, facilities, equipment, and information.

(b) Each department, agency, and instrumentality of the Executive Branch of the Government, including any independent agency, is authorized to furnish the Director such information as the Director deems necessary to carry out his functions under this title.

(c) Upon request, the Administrator of the National Aeronautics and Space Administration is authorized to assist the Director with respect to carrying out his activities conducted under paragraph (5) of section 205 of this Act.

SCIENCE, ENGINEERING, AND TECHNOLOGY REPORT

SEC. 208. (a) The President shall transmit annually to the Congress, beginning February 15, 1977, a Science, Engineering, and Technology Report (hereinafter referred to as the "Report") which shall be prepared by the Office, with appropriate assistance from the departments and agencies and such consultants and contractors as the Director deems necessary. The report shall include the estimates on Federal investment level and proposed priorities in science, engineering, and technology, prepared by the Director pursuant to section 204 of this Act, and to the extent practicable, within the limitations of available knowledge and resources, include such issues as—

(1) a review of developments of national significance in science, engineering, and technology;

(2) the significant effects of current and projected trends in science, engineering, and technology on the social, economic, and other requirements of the Nation;

(3) a review and appraisal of selected science-, engineering-, and technology-related programs, policies, and activities of the Federal Government;

(4) an inventory and forecast of critical and emerging national problems the resolution of which might be substantially assisted by the application of science, engineering, and technology;

(5) the identification and assessment of scientific, engineering, and technological measures that can contribute to the resolution of such problems, in light of the related social, economic, political, and institutional considerations;

(6) the existing and projected scientific, engineering, and technological resources, including specialized manpower, that could contribute to the resolution of such problems; and

(7) recommendations for legislation on science-, engineering-, and technology-related programs and policies that will contribute to the resolution of such problems.

(b) In preparing the Report under subsection (a) of this section, the Office shall make maximum use of relevant data available from the National Science Foundation and other government departments and agencies.

(c) The Director shall insure that the Report, in the form approved by the President, is printed and made available as a public document.

TITLE III—PRESIDENT'S ADVISORY COMMITTEE ON SCIENCE, ENGINEERING, AND TECHNOLOGY

ESTABLISHMENT

SEC. 301. The President is authorized to establish within the Executive Office of the President a President's Advisory Committee on Science, Engineering, and Technology (hereinafter referred to as the "Committee").

MEMBERSHIP

SEC. 302. (a) The Committee shall consist of—

(1) the Director of the Office of Science, Engineering, and Technology Policy established under title II of this Act; and

(2) not less than eight nor more than fourteen other members appointed by the President.

(b) Members of the Committee appointed by the President pursuant to subsection (a) (1) of this section shall—

(1) be exceptionally qualified and distinguished in science, engineering, technology, information dissemination, education, management, labor, or public affairs;

(2) be highly capable of critically assessing the policies, priorities, programs, and activities of the Nation, with respect to the findings, policies, and purposes set forth in title I; and

(3) shall collectively constitute a balanced composition with respect to (A) fields of science and engineering, (B) academic, industrial, and government experience, and (C) business, labor, consumer, and public interest points of view.

(c) The President shall appoint one member of the Committee to serve as Chairman and another member to serve as Vice-Chairman for such periods as the President may determine.

(d) Each member of the Committee who is not an officer of the Federal Government shall, while serving on business of the Committee, be entitled to receive compensation at a rate not to exceed the daily rate prescribed for GS–18 of the General Schedule under section 5332 of title 5, United States Code; including traveltime, and while so serving away from his home or regular place of business he may be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as the expenses authorized by section 5703(b) of title 5, United States Code, for persons in Government service employed intermittently.

FEDERAL SCIENCE, ENGINEERING, AND TECHNOLOGY SURVEY

SEC. 303. (a) The Committee shall survey, examine, and analyze the overall context of the Federal science, engineering, and technology effort including missions, goals, personnel, funding, organization, facilities, and activities in general, taking adequate account of the interests of individuals and groups that may be affected by Federal scientific, engineering, and technical programs, including, as appropriate, consultation with such individuals and groups. In carrying out its functions under this section, the Committee shall consider needs for—

(1) the establishment of such new departments, agencies, offices, or other organizations as may serve to strengthen the Nation's scientific, engineering, and technical capabilities and increase the effectiveness of their application to the solution of national problems;

(2) improvements in existing systems for handling scientific, engineering, and technical information on a Government-wide basis, including consideration of the appropriate role to be played by the private sector in the dissemination of such information;

(3) improved technology assessment in the executive branch of the Federal Government;

(4) improved methods for effecting technology innnovation, transfer, and use;

(5) stimulating more effective Federal-State and Federal-industry liaison and cooperation in science, engineering, and technology;

(6) reduction and simplification of Fed-

eral regulations and administrative practices and procedures which may have the effect of retarding technological innovation or opportunities for its utilization;

(7) a broader base for support of basic research;

(8) ways of strengthening the Nation's academic institutions' capabilities for research and education in science, engineering, and technology;

(9) ways and means of effectively integrating scientific, engineering, and technological factors into our national and international policies;

(10) technology designed to meet community and individual needs;

(11) maintenance of adequate scientific, engineering, and technological manpower with regard to both quality and quantity;

(12) improved systems for planning and analysis of the Federal science, engineering, and technology programs; and

(13) long-range study, analysis, and planning in regard to the application of science, engineering, and technology to major national problems or concerns.

(b) (1) Within one year of the appointment of a majority of its members, the Committee shall submit a report to the President of its activities, findings, conclusions, and recommendations including such supporting data and material as may be necessary.

(2) After appropriate review of the report submitted under paragraph (1) of this subsection, the President shall transmit the report to the Congress, together with any recommendations he may wish to make concerning its findings.

CONTINUATION OF COMMITTEE

SEC. 304. (a) Ninety days after transmission of the report prepared under section 303, the Committee shall cease to exist, unless the President, before the expiration of the ninety-day period, makes a determination that it is advantageous for the Committee to continue in being.

(b) If the President determines that it is advantageous for the Committee to continue in being, (1) the Committee shall continue in being and shall exercise such functions as are prescribed by the President; and (2) the members of the Committee shall serve at the pleasure of the President.

STAFF AND CONSULTANT SUPPORT

SEC. 305. (a) In the performance of its functions under sections 303 and 304, the Committee is authorized—

(1) to select, appoint, employ, and fix the compensation of such specialists and other experts as may be necessary for the carrying out of its functions under this Act, in accordance with section 3109 of title 5, United States Code (but without regard to the last sentence thereof);

(2) to appoint, assign the duties, and fix the compensation of personnel without regard to the provisions of title 5, United States Code, governng appointments in the competitive service, and without regard to the provisions of chapter 51 and subchapter III of chapter 53 of such title, relating to classification and General Schedule pay rates, at rates not in excess of the rate prescribed for GS–18 of the General Schedule under section 5332 of such title; and

(3) to provide for the participation of such civilian and military personnel as may be detailed to the Committee pursuant to subsection (b) of this section for carrying out the functions of the Committee.

(b) Upon request of the Committee, the head of any Federal department, agency, or instrumentality is authorized (1) to furnish to the Committee such information as may be necessary for carrying out its functions and as may be available to or procurable by such department, agency, or instrumentality, and (2) to detail to temporary duty with the Committee on a reimbursable basis such personnel within ihs administrative jurisdiction as it may need or believe to be useful for carrying out its functions. Each such detail shall be without loss of seniority, pay, or other employee status, to civilian employees so detailed, and without loss of status, rank, office, or grade, or of any emolument, perquisite, right, privilege or benefit incident thereto to military personnel so detailed. Each such detail shall be made pursuant to an agreement between the Chairman and the head of the relevant department, agency, or instrumentality, and shall be in accordance with the provisons of subchapter III of chapter 33, title 5, United States Code.

TITLE IV—FEDERAL COORDINATING GROUP FOR SCIENCE, ENGINEERING, AND TECHNOLOGY

ESTABLISHMENT AND FUNCTIONS

SEC. 401. (a) There is established the Federal Coordinating Group for Science, Engineering, and Technology (hereinafter referred to as the "Group").

(b) The Group shall be composed of the Director of the Office of Science, Engineering, and Technology Policy and one representative of each of the following Federal agencies: Department of Agriculture, Department of Commerce, Department of Defense, Department of Health, Education, and Welfare, Department of Housing and Urban Development, Department of the Interior, Department of State, Department of Transportation, Veterans' Administration, Nuclear Regulatory Commission, National Aeronautics and Space Administration, National Oceanic and Atmospheric Administration, National Science Foundation, Environmental Protection Agency, and Energy Research and Development Administration. Each such representative shall be an official of policy rank designated by the head of the Federal agency concerned.

(c) The Director of the Office of Science, Engineering, and Technology Policy shall serve as Chairman of the Group. The Chairman may make provision for another member of the Group to act temporarily in the Chairman's absence as Chairman of the Group.

(d) The Chairman may (1) request the head of any Federal agency not named in subsection (b) of this section to designate a representative to participate in meetings or parts of meetings of the Group concerned with matters of substantial interest to such agency, and (2) invite other persons to attend meetings of the Group.

(e) The Group shall consider problems and developments in the fields of science, enginering, and technology and related activities affecting more than one Federal agency, and shall recommend policies and other measures designed to—

(1) provide more effective planning and administration of Federal scientific, engineering, and technological programs,

(2) identify research needs including areas of research requiring additional emphasis,

(3) achieve more effective utilization of the scientific, engineering, and technological resources and facilities of Federal agencies, including the elimination of unnecessary duplication, and

(4) further international cooperation in science, engineering, and technology.

(f) The Group shall perform such other related advisory duties as shall be assigned by the President or by the Chairman.

(g) For the purpose of carrying out the provisions of this section, each Federal agency represented on the Group shall furnish necessary assistance to the Group. Such assistance may include—

(1) detailing employees to the Group to perform such functions, consistent with the purposes of this section, as the Chairman may assign to them, and

(2) undertaking, upon request of the Chairman, such special studies for the Group as come within the functions herein assigned to the Group.

(h) For the purpose of conducting studies and making reports as directed by the Chairman, standing subcommittees and panels of the Group may be established.

ABOLITION OF FEDERAL COUNCIL FOR SCIENCE AND TECHNOLOGY

SEC. 402. The Federal Council for Science and Technology, established pursuant to Executive Order 10807, issued March 13, 1959, as amended by Executive Order 11381, issued November 8, 1967, is hereby abolished.

TITLE V—STATE AND REGIONAL SCIENCE AND TECHNOLOGY PROGRAM

ESTABLISHMENT OF INTERGOVERNMENTAL SCIENCE, ENGINEERING, AND TECHNOLOGY ADVISORY PANEL

SEC. 501. (a) There is established within the Office an Intergovernmental Science, Engineering, and Technology Advisory Panel (hereinafter referred to as the "Panel").

(b) The Panel shall be composed of members as follows:

(1) One member from each State, to be appointed by the Governor of that State.

(2) The Director of the National Science Foundation or his representative.

(3) The Director or his representative.

In making appointments under this subsection, the Governor of each State shall appoint individuals who are familiar with State and local needs, who would be effective in serving as a liaison between the State and the Federal Government, and, to the extent practicable, are familiar with science, engineering, and technology issues.

(c) Each appointed member of the Panel shall, while serving on business of the Panel, be entitled to receive compensation at a rate not to exceed the daily rate prescribed for GS–18 of the General Schedule under section 5332 of title V, United States Code, including traveltime, and while so serving away from his home or regular place of business, he may be allowed travel expenses, including per diem in lieu of subsistence in the same manner as the expenses authorized by section 5703(b) of title V, United States Code, for persons in Government service employed intermittently.

(d) The Director, or his representative, shall serve as Chairman of the Panel.

(e) The Panel shall perform such functions as the Chairman may prescribe, and shall meet at the call of the Chairman.

FUNCTIONS OF THE PANEL

SEC. 502. (a) The Panel shall advise and assist the Director in—

(1) identifying and defining civilian problems at the State, regional, and local levels to whose solution or amelioration the application of science, engineering, and technology may contribute;

(2) establishing priorities for addressing the problems identified in paragraph (1); and

(3) identifying and fostering ways to facilitate the transfer and utilization of results of Federal research and development activities so as to maximize their application to civilian needs.

GRANTS FOR STATE SCIENCE, ENGINEERING, AND TECHNOLOGY ADVISORY PROGRAMS

SEC. 503 (a) From funds authorized under section 602 of this title, the Director of the National Science Foundation, after consultation with the Panel, is authorized to make grants of not to exceed $200,000 to any State to pay a part of the costs of establishing or strengthening offices of State science, engineering, and technology within the executive and legislative branches of the State government.

GERALD R. FORD LIBRARY

(b) The purpose of any such office shall be to promote the wise application of science, engineering, and technology to meeting the needs of the State and its political subdivisions, by providing assistance and advice to the Governor or the legislature of such State, as appropriate.

(c) No grant authorized under this section for the establishment or strengthening of an office of State science, engineering, and technology may exceed $100,000.

(d) No grant may be authorized under this section unless an application is submitted at such time, in such manner, and containing or accompanied by such information as the Director of the National Science Foundation shall require. Each such application shall contain provisions to assure that—

(1) the office for which assistance is sought under the application will (A) be headed by an official who, by reason of education and experience, is qualified to advise the Governor or legislature of a State, as appropriate, on the application of science, engineering, and technology to meeting the needs of the State and its political subdivisions, and (B) have sufficient authority, consistent with State law, to carry out any functions assigned to that office pursuant to this title; and

(2) it is the applicant's stated intention that the State will assume the costs of any office established or strengthened pursuant to this title not later than two years after the year in which the grant is made.

(e) The Director of the National Science Foundation shall approve any application which meets requirements of subsection (d) of this section, and shall not disapprove any application without affording an opportunity for a hearing.

(f) (1) The Director of the National Science Foundation shall pay to each State having an application approved under subsection (e) of this section the Federal share of the cost of that application.

(2) For each fiscal year the Federal share shall be 80 per centum.

(3) Any application submitted pursuant to this section shall not be funded unless such application is submitted to the Director of the National Science Foundation prior to thirty-six months after the date of enactment of this Act.

TITLE VI—GENERAL PROVISIONS

DEFINITIONS

SEC. 601. As used in this Act:

(1) The term "Office" means the Office of Science, Engineering, and Technology Policy.

(2) The term "Director" means the Director of the Office of Science, Engineering, and Technology Policy.

(3) The term "Committee" means the President's advisory Committee on Science, Engineering, and Technology.

(4) The term "Group" means the Federal Coordinating Group for Science, Engineering, and Technology.

(5) The term "Panel" means the Intergovernmental Science, Engineering, and Technology Advisory Panel.

(6) The term "Foundation" means the National Science Foundation.

(7) The term "State" means each of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Trust Territory of the Pacific Islands.

AUTHORIZATION OF APPROPRIATIONS

SEC. 602. (a) There are authorized to be appropriated $4,000,000 for the fiscal year 1976, of which $1,000,000 shall be available to carry out the provisions of title II, $1,000,000 shall be available to carry out the provisions of title III, and $2,000,000 shall be available to carry out the provisions of title V; $1,500,000 for the period beginning July 1, 1976, and ending September 30, 1976, of which $250,000 shall be available to carry out the provisions of title II, $250,000 shall be available to carry out the provisions of title III, and $1,000,000 shall be available to carry out the provisions of title V; and $12,000,000 for the fiscal year 1977, of which $3,000,000 shall be available to carry out the provisions of title II, $1,000,000 shall be available to carry out the provisions of title III, and $8,000,000 shall be available to carry out the provisions of title V.

(b) Funds appropriated pursuant to subsection (a) of this section shall remain available for obligation, for expenditure, or for obligation and expenditure, for such period or periods as may be specified in Acts making such appropriations.

REPEALER

SEC. 603. Sections 1, 2, 3, and 4 of Reorganization Plan Numbered 2 of 1962 (76 Stat. 1253) and section 2 of Reorganization Plan Numbered 1 of 1973 (87 Stat. 1089) are repealed.

Mr. KENNEDY. Mr. President, I rise in support of S. 32, the National Policy Organization, and Priorities for Science, Engineering and Technology Act of 1976.

This bill would provide the President with scientific expertise in dealing with the complex problems of modern society. Under the bill, the Science Adviser to the President would be an active member of the President's top team of advisers. He would be a member of the Domestic Council, a statutory Adviser to the National Security Council, and an active participant in the development of the Administration budget with respect to R. &. D.

He would develop 5-year forecasts of the Nation's R. & D. programs. Each year he would assess current developments in science and technology, relate them to national needs and his 5-year forecasts, and prepare a set of budget and priority options with respect to research and development for OMB to use in the development of the overall budget.

In addition, of course, the Science Adviser would continually be on call to provide the President with expert advice on science and technology policy matters.

As approved by the three committees, the bill establishes a White House Office of Science, Engineering, and Technology Policy, with a Director and up to four Associate Directors appointed by the President with the advice and consent of the Senate. The Director will be at the same salary level as the OMB Director, $44,600.

The bill also establishes a President's Advisory Committee on Science, Engineering, and Technology to do a comprehensvie survey of Federal organization for science and technology. In addition, the bill creates a grant program to provide seed money of up to $200,000 for each of the 50 States, so that they can establish science and technology advisory offices at the State level.

I am pleased that the bill as approved stipulates that the Director of the Science Advisory Office also serve as a member of the Domestic Council and as a statutory advisor to the National Security Council; and that the bill requires the Director to work closely with OMB in the development of the Federal budget for research and development.

These provisions will assure that the Science Director will be a full-fledged member of the President's top team of advisors, in domestic, international, and national security affairs.

The State and regional science and technology program will help the States in utilizing the full potential of science and technology to meet their own problems in economic development, energy, pollution control, transportation, and other areas involving science and technology.

The policy section of the bill sets a framework for the formulation of national policy and priorities in science and technology, stating that: First, there must be a continuing investment in science and technology directed toward the priority needs of the nation; second, the technical manpower pool is an invaluable national resource that should be fully utilized; and third, capabilities for technology assessment, planning, and policy formulation must be strengthened at both Federal and State levels." The bill authorizes $4,000,000 for the balance of the current fiscal year; $1,500,000 for the 3-month period from July 1 through September 30, 1976; and $12,000,000 for fiscal year 1977."

Mr. President, this bill is a revision of earlier bills of mine which passed the Senate in two previous Congresses. Since I re-introduced this bill in January 1975 it has been considered extensively by the Labor, Commerce, and Space Committees. Yesterday I filed the joint report on behalf of the three committees, which provides the detailed explanation of the bill.

I ask unanimous consent that excerpts from the committee report be printed in the RECORD.

I also have an exchange of correspondence between myself and the Vice President, and between myself and Senator CHURCH, which is highly relevant to this consideration, and I ask unanimous consent that these letters be printed in the RECORD at this point.

Mr. President, this bill would provide the nation with a means to establish sound national policies and priorities for science and technology. I urge all Senators to support this measure.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

[Excerpts from committees' joint report on S. 32]

SUMMARY OF BILL

General

This Act establishes a framework for the formulation of national policy and priorities for science and technology, including the establishment of an Office of Science, Engineering, and Technology Policy in the Executive Office of the President.

TITLE I

Declaration of policy

Title I establishes as national policy that: (a) there must be a continuing investment in science and technology directed toward the priority needs of the nation; (b) the technical manpower pool is an invaluable national resource that should be fully utilized; and (c) capabilities for technology assessment, planning, and policy formulation must be strengthened at both Federal and State levels. Title I also sets forth fifteen priority areas for allocation of the Federal investment in science and technology.

GERALD R. FORD LIBRARY

TITLE II

Office of Science, Engineering, and Technology Policy

Title II establishes an Office of Science, Engineering, and Technology Policy in the Executive Office of the President, administered by a Director (at Level II of the Executive Schedule), appointed by and with the advice and consent of the Senate. The President is authorized to appoint up to four Associate Directors (at Level III of the Executive Schedule), also with Senate confirmation.

The Office shall: prepare and annually update a five-year forecast of Federal investment in science and technology, including estimates of the allocation of Federal funds among major expenditure areas; annually estimate a range of options for various levels of Federal investment in science and technology, including a range of priority options for allocating Federal funds among major expenditure areas; and furnish the options to the Office of Management and Budget for use in developing budget recommendations to the President.

The Office shall provide the President with a continuing source of policy planning, analysis, and advice with respect to major policies, plans, and programs of science and technology of the Federal government.

The Director of the Office shall chair the Federal Coordinating Group for Science, Engineering, and Technology (established under Title IV) and the Intergovernmental Science, Engineering, and Technology Advisory Panel (established under Title V); shall serve as a member of the Domestic Council; and as an adviser to the National Security Council. The Director shall coordinate the work of the Office with the Domestic Council, NSC, CEQ, CEA, OMB, and the departments and agencies.

The Office shall prepare an annual Report on Science, Engineering, and Technology which the President shall transmit to the Congress.

TITLE III

President's Advisory Committee on Science, Engineering, and Technology

Under Title III, the President shall appoint an Advisory Committee of between 9 and 15 members, including the Director of the Office. The Committee shall conduct a comprehensive survey of Federal science and technology, and submit a report thereon to the President within one year. After receipt of the report, the Committee shall expire unless the President deems it advantageous to continue the Committee as an ongoing Advisory Committee.

TITLE IV

Federal coordination group for science, engineering, and technology

Title IV redesignates the Federal Council for Science and Technology as the Federal Coordinating Committee for Science, Engineering, and Technology, and gives it the statutory authority to coordinate Federal plans and programs in science and technology. The Director of the Office is designated as Chairman of this Group.

TITLE V

State and region science, engineering, and technology program

Title V establishes an Intergovernmental Science, Engineering, and Technology Advisory Panel to advise the Director in establishing priorities for addressing civilian problems at State, regional and local levels which science and technology can help resolve. This title also establishes a State Science, Engineering, and Technology Program within the National Science Foundation to make grants of up to $200,000 to any State to enable it to establish or strengthen Offices of Science, Engineering, and Technology within the executive or legislative branches of State governments, provided that the State provides matching funding on an 80% Federal, 20% State basis.

TITLE VI

Authorization of appropriations

Title VI authorizes $4,000,000 for fiscal year 1976; $1,500,000 for the period from July 1 through September 30, 1976; and $12,000,000 for fiscal year 1977.

SECTION-BY-SECTION ANALYSIS

TITLE I—NATIONAL SCIENCE, ENGINEERING, AND TECHNOLOGY POLICY AND PRIORITIES

Findings

Section 101. This section states the findings of Congress that: Federal funding for science and technology is an investment in the nation's future; the technical manpower pool is an invaluable national resource which should be fully utilized; strong participation by State and local governments is essential; diversified technical capabilities in government, industry, and the universities are essential; and a systematic approach is needed, including long-range planning, as well as intermediate and short-range program development.

Declaration of policies and priorities

Section 102. This section declares it to be national policy that: there be a continuing investment in science and technology adequate to national needs; that the Federal Government must promote the utilization in the national interest of the Nation's human resources in science, engineering, and technology; capabilities for technology assessment, planning, and policy formulation must be strengthened of both Federal and State levels; the Federal investment in science and technology must be addressed to the priority needs of the Nation, including (a) national strength in research and education, (b) dissemination of technical knowledge, (c) utilizing science and technology in support of national goals, (d) promoting conservation and efficient utilization of natural and human resources, (e) protecting the oceans and coastal zones, (f) strengthening the economy and promoting full employment, (g) assuring adequate supplies of food, materials, and energy, (h) strengthening national security, (i) improving the quality of health care, (j) improving transportation and communication services, (k) increasing educational opportunities, (l) assuring effective public services, (m) developing high-quality, low-cost housing, (n) eliminating air and water pollution and unhealthful drugs and food additives, and (o) enhancing environmental quality.

Declaration of purpose

Section 103. This section declares the purpose of this Act to: (1) establish an Office of Science, Engineering, and Technology Policy in the Executive Office of the President; (2) establish a State and Regional Science, Enginering, and Technology Program; (3) establish an Interagency Federal Coordinating Group on Science, Engineering, and Technology; and (4) require the President to submit an annual Science, Engineering, and Technology Report to Congress.

TITLE II—OFFICE OF SCIENCE, ENGINEERING, AND TECHNOLOGY POLICY

Establishment

Section 201. This section establishes an Office of Science, Engineering, and Technology Policy in the Executive Office of the President.

Director

Section 202. This section states that the Office shall be administered by a Director, appointed by President with the advice and consent of the Senate and compensated at the rate provided for level II of the Executive Schedule.

Associate directors

Section 203. This section authorizes the President to appoint with the advice and consent of the Senate, up to four Associate Directors, compensated at a rate not to exceed level III of the Executive Schedule.

Federal investment and priorities

Section 204. This section states that the Office shall: prepare and annually update a five-year forecast of Federal investment in science, and technology, including estimates of the allocation of Federal funds among major expenditure areas; annually estimate a range of options for various levels of Federal investment in science and technology, including a range of priority options for allocating Federal funds among major expenditure areas; and furnish the options to the Office of Management and Budget for use in developing budget recommendations to the President.

Policy planning, analysis, and advice

Section 205. This section states that the Office shall serve as a source of scientific, engineering, and technological analysis and judgment for the President with respect to major policies, plans, and programs of the Federal Government.

Additional functions of the director

Section 206. This section states that the Director shall serve as Chairman of the Federal Coordinating Group for Science, Engineering, and Technology, as a member of the Domestic Council, as a member of the Intergovernmental Science, Engineering, and Technology Advisory Panel, and as a Statutory Adviser to the National Security Council in such matters concerning science, engineering, and technology as relate to national security; and that the Director is authorized to appoint and compensate personnel and enter into contracts and other arrangements for studies, analyses, and other services.

Coordination with other organizations

Section 207. This section states that the Director shall coordinate with the Domestic Council, the National Security Council, the Council on Environmental Quality, the Council of Economic Advisers, the Office of Management and Budget, and the Federal departments and agencies; utilize consultants and advisory panels and consult with individuals and groups throughout the society as he deems advisable; hold hearings; utilize with their consent the services of public and private agencies, organizations, and individuals, and transfer funds to other Federal agencies; that each agency of the executive branch is authorized to furnish the Director information necessary to carry out his functions; and that the Administrator of the National Aeronautics and Space Administration is authorized to assist the Director with respect to system analyses of alternative applications of science and technology.

Science, engineering, and technology report

Section 208. This section states that the President shall transmit an annual Science, Engineering, and Technology Report to the Congress, individuals and groups throughout the society as he deems advisable; which shall be prepared by the Office, with appropriate assistance from other agencies, consultants, and contractors. The report shall include the Office's discussion of options on Federal investments and priorities in science and technology, and shall deal, to the extent practicable and within the limitations of available knowledge and resources, with a range of national policy issues involving science and technology.

TITLE III—PRESIDENT'S ADVISORY COMMITTEE ON SCIENCE, ENGINEERING, AND TECHNOLOGY

Establishment

Section 301. This section authorizes the President to establish a President's Advisory

GERALD R. FORD LIBRARY

Committee on Science, Engineering, and Technology.

Membership

Section 302. This section states that the Committee shall consist of the Director and between eight and fourteen other members appointed by the President; that the President shall appoint a Chairman and Vice Chairman; and that the members are entitled to be reimbursed for their official expenses and to receive compensation for their services at a rate not to exceed the daily rate prescribed for GS–18 of the General Schedule.

Federal science, engineering, and technology survey

Section 303. This section states that the Committee shall survey, examine, and analyze the overall context of the Federal science, engineering, and technology effort including missions, goals, personnel, funding, organization, facilities, and activities in general; that the Committee shall submit a report of its findings, conclusions, and recommendations to the President within one year of the appointment of a majority of its members; and that, after appropriate review, the President shall transmit the report to Congress, together with any recommendations he may wish to make concerning its findings.

Continuation of Committee

Section 304. This section states that the Committee will cease to exist ninety days after transmission of the report, unless the President makes a determination that it is advantageous for the Committee to continue in being, in which case the Committee shall exercise such functions as are prescribed by the President, with its members serving at the pleasure of the President.

Staff and consultant support

Section 305. This section provides for appropriate staff and consultant support to the Committee.

TITLE IV—FEDERAL COORDINATING GROUP FOR SCIENCE, ENGINEERING, AND TECHNOLOGY

Establishment and functions

Section 401. This section establishes the Federal Coordinating Group for Science, Engineering, and Technology, to be chaired by the Director, and to exercise the same functions as those heretofore exercised by the Federal Council for Science and Technology. These functions are purely advisory in nature and involve no exercise of authority over the participating agencies, whose participation is governed by their applicable statutes.

Abolition of Federal Council for Science and Technology

Section 402. This section abolishes the Federal Council for Science and Technology, which had been established by Executive Order in 1959.

TITLE V—STATE AND REGIONAL SCIENCE AND TECHNOLOGY PROGRAM

Establishment of Intergovernmental Science, Engineering, and Technology Advisory Panel

Section 501. This section establishes within the Office an Intergovernmental Science, Engineering, and Technology Advisory Panel, composed of the Director or his representative, the Director of the National Science Foundation or his representative, and one member from each State, to be appointed by the Governor of that State; provides for reimbursement for official expenses incurred by Panel members and for their compensation at a rate not to exceed the daily rate for GS–18 of the General Schedule; states that the Director or his representative shall serve as Chairman of the Panel; and states that the Panel shall meet at the call of the Chairman.

Functions of the panel

Section 502. This section states that the Panel shall advise and assist the Director in identifying and defining civilian problems at the State, regional, and local levels susceptible to scientific and technical solution or amelioration; in establishing priorities for addressing such problems; and in fostering the utilization of the results of Federal research and development activities so as to maximize their application to civilian needs.

Grants for State science, engineering, and technology advisory programs

Section 503. This section states: that the National Science Foundation is authorized to make grants to any State ot pay a part of the costs of establishing or strengthening offices of State science, engineering, and technology within the executive and legislative branches of the State government; that the purpose of any such office shall be to promote the wise application of science and technology to the needs of the State; that no grant to a State's legislature or executive branch may exceed $100,000; that the total amount granted to any State may not exceed $200,000; that the Federal share of the cost of the office shall be 80% of the total annual cost; that the State will assume the cost of any such office not later than two years after award of the grant; that the Director of the National Science Foundation shall approve any grant application which meets the requirements of this Act and such regulations as he may establish.

TITLE VI—GENERAL PROVISIONS

Definitions

Section 601. This section defines terms used in this Act.

Authorization of appropriations

Section 602. This section authorizes appropriations to carry out the provisions of this Act of $4,000,000 for fiscal year 1976; $1,500,000 for the period from July 1, 1976 through September 30, 1976; and $12,000,000 for fiscal year 1977.

Repealer

Section 603. This section repeals sections 1, 2, 3, and 4 of Reorganization Plan Numbered 2 of 1962 and section 2 of Reorganization Plan Numbered 1 of 1973.

Legislative history

The Committee on Labor and Public Welfare began serious consideration of national policies and priorities for science and technology in the course of committee examination of the problems of postwar economic conversion in the Ninety-first Congress. On December 1 and 2, 1969, the Committee held hearings on Postwar Economic Conversion. The Committee heard testimony from Professor Warren L. Smith, Department of Economics, University of Michigan and former member of the Council of Economic Advisers; Dr. Seymour Melman, economist and professor of industrial engineering at Columbia University; the late Walter P. Reuther, President of the United Auto Workers; Dr. Wilfred Lewis, Jr. of the National Planning Association; the Honorable Archibald S. Alexander, former Assistant Director for Economics of the U.S. Arms Control and Disarmament Agency; and Nathaniel Goldfinger, Director of Research, AFL–CIO.

Additional hearings on Postwar Economic Conversion were held before the Committee in Lexington, Massachusetts on March 23, 1970, and in Framingham, Massachusetts on April 3, 1970. At those hearings the Committee heard testimony from General James Gavin, Chairman of the Board, Arthur D. Little, Inc.; Dr. George Gols of Arthur D. Little; Carroll Sheehan, Commissioner of the Massachusetts Department of Commerce and Development; Bernard O'Keefe, President of E.G. & G. Corporation; D. Justin McCarthy, President of Framingham State College; Joseph Hyman, President of Hycor Corporation; Dr. Arthur S. Obermayer, President of Moleculon Corporation; Dr. Duncan MacDonald, business consultant; and William Alexander, President of the Research, Development, and Technical Employees Association, MIT Laboratories.

The testimony and statements for the record submitted at these hearings provided the Commitee with a comprehensive background on the problems of economic conversion and a realization that national legislation was required to enable the country to build a strong base of civilian science and technology.

As Chairman of the Special Subcommittee on the National Science Foundation, Senator Edward M. Kennedy began developing legislation aimed at meeting needs in this area. On August 14, 1970, he introduced S. 4241, the Conversion Research and Education Act. Although it was not possible to hold hearings on the bill before the end of the Ninety-first Congress, the bill was subjected to close scrutiny by leading authorities in this field throughout the Nation.

After careful consideration of their comments and suggestions, the bill was revised and re-introduced by Senator Kennedy in the Ninety-second Congress on January 25, 1971, as S. 32, the Conversion, Research, Education, and Assistance Act. The bill was referred to the Committee on Labor and Public Welfare and assigned to the Subcommittee on the National Science Foundation

The bill was circulated among leading authorities throughout the Nation who were expert in various of its aspects, and their comments and suggestions were carefully studied by the Subcommittee. At the same time a companion bill to S. 32 had been introduced in the House of Representatives as H.R. 34, by Congressmen John W. Davis and Robert N. Giaimo and one hundred and eleven cosponsors in January 1971. H.R. 34 was virtually identical to S. 32. Consequently the eight days of comprehensive hearings which the House Committee on Science and Astronautics held on H.R. 34 on June 22, 23, 24, July 13, 14, 15, and August 5 and 6, 1971 proved extremely helpful in the National Science Foundation Subcommittee's consideration of S. 32.

Based on the extensive comments and suggestions which were received over these months, from various experts and organizations throughout the country and through the House hearings, Senator Kennedy filed Amendment 469 to S. 32 on October 13, 1971. This amendment was designed to take account of many of the suggestions which the Subcommittee had received.

On October 26 and 27, 1971, the Subcommitte on the National Science Foundation held hearings on S. 32, including consideration of Amendment 469. (The hearings also considered S. 1261, the Economic Conversion Loan Authorization Act, which is still under study by the Subcommittee on the National Science Foundation.) Testimony was heard from the Administration spokesman, Dr. William D. McElroy, Director of the National Science Foundation; Paul Robbins, Executive Director of the National Society of Professional Engineers; Jack Golodner, Executive Secretary of the Council of AFL–CIO Unions for Scientific, Professional, and Cultural Employees; Sanford V. Lenz, Chairman, Professional, Technical, and Salaried Conference Board, IUE, AFL–CIO; Mrs. Betty Vetter, Executive Director, Scientific Manpower Commission; Professor Paul H. Thompson, Graduate School of Business Administration, Harvard University; and four unemployed engineers—Robert Fraser from Lincoln, Massachusetts, S. Robert Salow from Newton, Massachusetts, Charles Laible from Cherry Hill, New Jersey, and Nathan N. Budish from Seattle, Washington.

In addition to the testimony received at the hearings, the hearings record also included statements on the legislation from the Comptroller General and the Adminis-

tration and from twenty-seven organizations and individuals with special competence in this area. Since the hearings record was published, scores of other statements had been received from interested organizations and individuals with respect to S. 32.

Based on all of the information and the views which were received, the bill was further revised and considered by the Special Subcommittee on the National Science Foundation in an Executive Meeting on April 5, 1972. At that meeting, upon the suggestion of Senator Dominick, the Subcommittee agreed to submit the bill (in its revised form) to the Executive Agencies and the General Accounting Office for further comment. Letters were received from sixteen agencies and the GAO, and the specific comments were taken into careful account by the Subcommittee.

Based on those comments, the bill was further revised and considered again by the Subcommittee in Executive Meeting on May 30, 1972. At that meeting, the Subcommittee, without opposition, favorably reported the bill to the full Committee with an amendment in the nature of a substitute and with a title amendment.

The bill was considered by the full Committee on Labor and Public Welfare in Executive Meetings on June 21 and June 28, 1972. At the June 28 meeting, the Committee on Labor and Public Welfare ordered the bill, with a modified amendment in the nature of a substitute and with a title amendment, reported favorably to the Senate. On the roll call vote to report, all seventeen members of the Committee were recorded as voting to report the bill favorably.

On August 17, 1972, the bill was considered by the Senate, and passed by a vote of 70 to 8. It was then sent to the House of Representatives where it was referred to the Committee on Science and Astronautics. No action was taken by the House prior to the adjournment of the 92d Congress.

On January 4, 1973, Senator Kennedy reintroduced S. 32. On May 2, 1973, Senator Dominick introduced S. 1686, the Civilian Science and Technology Policy Act of 1973. Both bills were referred to the Senate Committee on Labor and Public Welfare.

S. 2495 was introduced on September 27, 1973 by Senator Magnuson, Senator Moss, and Senator Tunney. The bill was referred jointly to the Committee on Commerce and the Committee on Aeronautical and Space Sciences. On September 28, 1973 unanimous consent was given that when the two Committees report the bill, it would be rereferred to the Committee on Labor and Public Welfare.

On January 18, 1974 a working draft of a revised version of S. 2495 was prepared by the Commerce and Aeronautical and Space Sciences Committees and distributed for comments.

Joint hearings on S. 2495 and the working draft were held by the Commerce and Aeronautical and Space Sciences Committees on March 11 and March 21, 1974.

Subsequent to those hearings, the bill underwent further revisions, and Amendment No. 1537 to S. 2495 was introduced by Senators Magnuson, Moss, and Tunney on June 27, 1974. The Commerce and Aeronautical and Space Sciences Committee held a joint hearing on Amendment No. 1537 to S. 2495 on July 11, 1974. Witnesses at the July 11 hearing included four former Presidential Science Advisers: Dr. Edward E. David, Jr., Dr. Lee A. DuBridge, Dr. Donald F. Horning, and Dr. George B. Kistiakowsky.

The Commerce Committee met in Executive Session on July 31, 1974 and ordered S. 2495 reported, with an amendment in the nature of a substitute. Identical action was taken by the Aeronautical and Space Sciences Committee at its Executive Session held September 18, 1974. On September 18, 1974, S. 2495 was referred to the Committee on Labor and Public Welfare for further consideration.

On October 8, 1974 the Special Subcommittee on the National Science Foundation held a hearing on S. 32, S. 1686 and S. 2495. Testimony was heard from the Administration spokesman, Dr. Guyford H. Stever, Director of the National Science Foundation and Science Adviser; Dr. Edward Wenk, Jr., Chairman of the Committee on Public Engineering Policy of the National Academy of Engineering; and Dr. Thomas G. Fox, Chairman of the Governor's Science Advisory Committee, State of Pennsylvania.

Based on the testimony which was presented at the hearing, the three bills were further revised and considered by the Subcommittee in an Executive Meeting on October 8, 1974. At that meeting, the Subcommittee unanimously favorably report S. 32, to the full Committee with an amendment in the nature of a substitute and with a title amendment. All seven members of the Subcommittee were recorded as voting to report the bill to the full Committee.

The bill was considered by the full Committee on Labor and Public Welfare on October 8, 1974. The Committee ordered the bill, with an amendment in the nature of a substitute and with a title amendment, reported favorably to the Senate. All sixteen members of the Committee were recorded as voting to report the bill favorably.

The Senate passed the bill by unanimous voice vote on October 11, 1974. It was then sent to the House of Representatives where it was referred to the Committee on Science and Astronautics. No action was taken by the House prior to the adjournment of the 93rd Congress.

On January 15, 1975, Senator Kennedy reintroduced S. 32 (in a form identical to the bill that had passed the Senate in October, 1974) with the cosponsorship of Senators Moss and Tunney and 29 other Senators. This bill was referred jointly to the Committees on Labor and Public Welfare, Commerce, and Aeronautical and Space Sciences.

A significant break occurred on May 22, 1975, when President Gerald R. Ford met with Vice President Nelson A. Rockefeller, Senators Moss, Goldwater Beall, and Laxalt, and Congressmen Teague, Mosher, Thornton, Conlan, and Symington, to announce his approval of a proposal prepared by the Vice President to re-establish the Science and Technology Office in the White House, and to do so by legislation. The President decided in favor of a single director with a small staff, rather than a council. This proposal was introduced in the Senate on June 20, 1975, as S. 1987 by Senator Moss (for himself and Senator Goldwater) (by request) and was also referred jointly to the Committees on Aeronautical and Space Sciences, Commerce, and Labor and Public Welfare. The provisions of S. 1987 were subsequently amended and incorporated in Titles II and VI of S. 32.

In the meantime, on June 6, 1975, Senator Kennedy presided at an historic White House Science Advisory Conference. At this Conference in the Dirksen Senate Office Building, the Vice President met with Senator Kennedy, as host, and Senators Moss, Tunney, Javits, Goldwater, Schweiker, Mathias, Beall, Stafford, Domenici, Laxalt, and Garn. This was the first time in modern American history that a Vice President of the United States sat down with members of the United States Senate, in full public view, to participate in a free, informed, bipartisan discussion of national policy needs. The Conference was not a hearing and did not consider specific legislative proposals, but provided an opportunity for the Vice President and the Senators to discuss the national issues involved in the re-establishment of a White House Science Advisory Office. The Conference proved extremely useful in the subsequent development of the Senate legislation.

On October 28, November 4, and November 12, 1975, joint hearings on S. 32 were held before the Special Subcommittee on the National Science Foundation of the Committee on Labor and Public Welfare; the Special Subcommittee on Science, Technology, and Commerce of the Committee on Commerce; and the Committee on Aeronautical and Space Sciences. Senator Kennedy chaired the hearing on October 28th; Senator Tunney, the hearing on November 4th; and Senator Moss, the hearing on November 12th. During the period after the President's announcement of May 22, 1976, the House Committee on Science and Technology held extensive hearings on several science and technology policy bills, culminating in the passage of H.R. 10230 by the House on November 6, 1975. This bill was also referred jointly to the Committee on Aeronautical and Space Sciences, Commerce, and Labor and Public Welfare. Provisions of H.R. 10230 were particularly examined in the aforementioned hearing chaired by Senator Moss on November 12, 1975.

Testimony was provided by Dr. Philip Handler, President of the National Academy of Sciences; Dr. Emanuel R. Piore, Retired Vice President and Chief Scientist, IBM Corporation; Dr. Eugene B. Skolnikoff, Director of the Center for International Studies and Professor of Political Science at Massachusetts Institute of Technology; Dr. James R. Killian, Jr., author of the National Academy of Sciences "Report on Science and Technology in Presidential Policymaking"; Dr. Roger Revelle, Chairman of the Board, American Association for the Advancement of Science; Dr. Richard Scribner, Head of the Office of Special Programs of the American Association for the Advancement of Science; Dr. Thomas G. Fox, Science Adviser to the Governor of Pennsylvania; Dr. H. Guyford Stever, Director of the National Science Foundation and Science Adviser to the President; and Mr. Arthur P. Stern, President of the Institute of Electrical and Electronic Engineers.

Following the Conference with the Vice President and the hearings before the Senate Committees, the staffs of the three Committees made proposed revisions to S. 32. In developing these revisions, extensive discussions were held with representatives of the scientific and technical community and with responsible staff members of the Executive Office of the President, the National Science Foundation, and the House Committee on Science and Technology. A final version was prepared on January 19, 1976, for the consideration of the Committees.

On January 21, 1976, the Committee on Aeronautical and Space Sciences met in executive session and, without objection, ordered S. 32, with an amendment in the nature of a substitute, favorably reported to the Senate.

On January 27, 1976, the Special Subcommittee of the National Science Foundation met in executive session and voted unanimously that S. 32, with an amendment in the nature of a substitute be reported to the full Committee on Labor and Public Welfare. On January 28, 1976, the Committee on Labor and Public Welfare met in executive session and unanimously voted favorably to report S. 32, with an amendment in the nature of a substitute, to the Senate. On January 29, 1976, the Committee on Commerce met in executive session and without objection, voted favorably to report S. 32, with an amendment in the nature of a substitute, to the Senate. The amendment in the nature of a substitute to S. 32 adopted by the Committee on Labor and Public Welfare, which in turn was identical to the one adopted by the Committee on Aeronautical and Space Sciences.

GERALD R. FORD LIBRARY

Explanation of Need

Science and technology have become central to Western civilization. Throughout history, science and technology have had occasional, but significant impacts on military capabilities and economic development. However, only recently have we seen the importance of science and technology in dealing with civilian needs. Our military security depends on scientific research and development. Our economic development and productivity, along with our international competitive position, depend on increasing technical innovation to provide new products and services which meet changing needs. And the quality of life in our society—the adequacy of health care, the preservation of the environment, the adequacy of educational programs, the provision of food, housing, transportation and communication services, and the very sources of energy which make other services possible—all are interwoven with, and depend in part on, the efficacy of scientific and technical progress.

Since World War II the principal focus of the Nation's scientific programs has been on defense, and since Sputnik, on space. In these activities, the Federal Government has been the major supporter of research and development. The achievements of the Nation's scientists and engineers in these areas have been sweeping in scope, and staggering in their impact. The development of an overwhelming arsenal of nuclear weapons, ballistic missiles, travel to the Moon and probes to other planets are now commonplace facts to our children.

The application of science and technology to national security needs and space objectives have had some important spin-off effect on the civilian area of our economy and society. Computers, the vast expansion in electronics, and passenger jet aircraft are all derived from military and civilian space R. & D. programs. But many areas of the civilian sector have not yet been significantly affected by scientific research. Textile, shoe, and furniture manufacturing are three examples of civilian industries which are still dependent on traditional methods and which have not reaped the benefits which scientific advance can provide.

And in the public service sector of the economy, the extent to which modern technology has been applied is even less. Trash in our city streets is still collected in the same inefficient manner, and still disposed of in vast rubbish heaps that mar our countryside and pollute our air. Transportation in our metropolitan areas becomes more snarled and inconvenient all the time. And adequate health care for all our citizens continues to become more costly, even when it is available.

In the civilian sector of our economy and in public services, the vast promise of science and technology has not been realized. A principal reason for this is that the Nation has lacked sound national policies and priorities for science and technology.

This has been especially true since 1973 when Reorganization Plan Number 1 abolished the White House Office of Science and Technology. Since that time the President has been without the top-level scientific assistance he needs to deal with the complex technical issues of our time.

Science for most of our citizens is a mysterious code that can only be deciphered by specialists. The policy issues faced by the President involve too many complex technological components for him not to have immediate access to the very best scientific advice our Nation has to offer.

No single scientist can provide such advice. But a first-rate science policy office with a capable staff can rapidly tap the top-flight technical talent throughout our society to provide the President with the best advice possible. This office can also provide a mechanism to anticipate future problems and needs, help coordinate the various Federal research and development activities, and interact with the States concerning their needs related to science and technology.

A White House Science Adviser, (a) with effective relationships with the President, within the Executive Office, and with the various agencies, (b) will access to the technical community, and (c) with adequate resources to do the job, will assure that the President and the Nation will be in a much better position to deal with complex issues involving science and technology.

Conference With the Vice President

The Conference with the Vice President on June 6, 1975, provided valuable perspective in the development of the legislation. The following excerpt from that conference provides useful background in understanding the provisions of the bill as reported by the three Committees (pages 30–31, "Proceedings of the White House Science Advisory Conference, 1975, Special Subcommittee on the National Science Foundation of the Committee on Labor and Public Welfare, July 1975):

"Senator KENNEDY. If I can carry on a little bit further based on what Senator Javits was talking about. Mr. Vice President, do you expect in this annual report that one of the responsibilities of the advisory group would be to indicate what should be the national investment in the areas of science and research, whether we ought to establish some goals in those areas, and perhaps how we ought to be allocating the resources within these goals so that we will be looking ahead to the allocations of resources in the area of science and technology over the period of, say 5 years?

"Is this something you think should be included or would be useful in providing both the country and the Congress, with some guideposts as we consider this whole area?

"Vice President ROCKEFELLER. I would have to say, Senator, I think that is the key to it. I think it is the heart, what you have gone right to. It is the conceptual approach to the role of science and technology in our whole society of life, its future, and our role in the world.

"I think that is the heart of it. I think it has got to go further, in a sense. It has to go back—in the report, he has to go back and look at what the high schools are doing, the number of students coming into the field, what colleges are doing, and what has been done by government and by the private sector in these fields, so that, to me, I share completely that thought that this would be basic.

"And this report prepared by Dr. Hans Mark is very much in that direction.

"These things just do not happen. We have to plan and, as you say, we have to plan ahead of time, if you are going to get there. And we are beginning to fall behind in this whole field.

"Senator JAVITS. That is most alarming.

"Senator KENNEDY. One of the things that always strikes us in the National Science Foundation Subcommittee is the fact that, as you well know, military R. & D. is not considered within the scope of the Director of the National Science Foundation, who has been serving as the President's science adviser. And I think your comments have been very reassuring in indicating that that military research and development will certainly be within the scope of the science adviser as you see that function.

"One of the things which many of us have been interested in is the very large amount of research that is being done for defense and space-related programs.

"I do think we have seen, in terms of our competitive position in the world, that many of our friends, allies, and competitors in the free world, are devoting a good deal more resources to civilian science and technology, than we are.

"Vice President ROCKEFELLER. That is right.

"Senator KENNEDY. And we, as a country and as a society, ought to recognize that—which I am not sure that we do at the present time—and begin to move the country more in those directions.

"Vice President ROCKEFELLER. May I just say on that, that again I agree."

Witnesses Testimony

All of the witnesses who appeared in the hearings strongly supported the re-establishment in the White House of a Science and Technology Advisory Office. The following excerpts from the testimony help clarify the need for, and intent of, various provisions in the bill as reported:

Dr. Philip Handler (President of the National Academy of Sciences):

"A congressional statement of policy (for science and technology) could provide a perspective and sense of purpose and direction to development of Federal programs and detailed policies. It would guide the many individual decisions that, collectively, determine how wisely and well we are able to realize the potential of science and technology in serving the public good."

Dr. Emanuel R. Piore (Retired Vice President and Chief Scientist, IBM Corporation):

"Another function that should be stressed in a very important manner, is that the group or Science Adviser must take an active role in assuring the country the health of scientific and technical institutions, the Government labs, the universities, the nonprofit labs, the scientific and technologic health of our industry. This is not stressed. And I will return to the health of our laboratories in a moment.

"Second, I think it is important that the legislation state whether they have a Council or single person, that "he" will be a member of the National Security Council, "he" will be a member of the Domestic Council, and not say "he" will coordinate or develop appropriate working relations. It is very important that a technical person sit when policy is debated, understand whether the policy needs technological backing, whether it is possible to get the technological answer in time to serve the national purpose. There are occasions where action is required based on inadequate knowledge.

"Developing appropriate working relationships will not service the purpose. The Security Council may assign the wrong problem or irrelevant problem to the policy, and the same is true of the Domestic Council.

"The Office of Science Adviser to the President was most effective when there was a complete open door to Killian, Kistiakowsky, Wiesner to the Security Council. We would never have been able to come up with the policy with regard to arms limitation without that open door. And, thus, I would hope that the language would be changed where it would be mandatory for the President to put these people on the Councils and not just hope that the adviser will have an open door.

"It becomes a little more difficult to define the relation between the Science and Technology Council and the Bureau of Management and Budget. It is the Presidential budget and it is not the budget of the Council. And here the annual report can play a very important role. The drafts of the annual report will be seen by the Bureau of the Budget. Debate can take place. Disgreements resolved. This also will provide the best possible coupling with the other agencies. If they know annually that their R. & D. budget will be discussed by the Council or the Adviser and coupled directly to the Bureau of the Budget, there will be no problem of

having coordination. I had partial coordinating responsibility for research in the Navy when I was younger. Once the budget is at stake, coordination becomes almost automatic.

"This is also related to the annual report which should deal with the current situation. I have observed very important and well presented documents on the future of various areas of science and technology in our society. Congress files them. To date I have not observed any hearings in Congress on these reports.

"Congress ought to be aware when they vote the authorization and the appropriation what are the critical problems in science and technology covered in the executive department submissions. The other type of report is in its own right very important, necessary in that it is vital to understand what the future holds for us.

"Therefore, I see the Council having two very fundamental functions. One is to look to the future. The other is to get word to Congress what budgetary items mean, as far as its impact on our daily life. Congress and its staff are well rounded, and thoroughly understanding of all the social issues and implications of various monetary and legislative action. We are trying to get a similar sensitivity in science and technology. That is why I would look to the annual report to address itself to Congress via the President, really pointing out what that budget means to the health of science, to the health of technology, to our foreign policy, and all these other items that science and technology is involved in."

Dr. Eugene B. Skolnikoff (Director of the Center for International Studies and professor of Political Science at Massachusetts Institute of Technology):

"Given the fact that this legislation is designed to provide for the long term, I wonder if there should not be a reference to the possibility of creating once again a standing advisory committee for science and technology. This may be more important for an office headed by a single director than for a council of advisers.

". . . There are several parts to this international role. One is the integral relation of science and technology to many issues of foreign policy, or to domestic policy with international implications—it is a cliche to assert that it is increasingly difficult to separate foreign from domestic affairs; but it is also true—a good share of the advisory relationship with the President should and hopefully will be concerned with international issues in which science and technology play an important, sometimes crucial, role.

"A second aspect of the international role is policy for international cooperation in science and technology, which is in fact referred to in the House bill. It is an important issue area, but one that to my mind is simply not as significant as are the broader international policy questions.

"Third is an aspect often neglected that I believe should be an important concern of a White House science officer. I refer to the fact that a substantial share of Federal R. & D. expenditures are motivated in large measure by international considerations (defense, space, some of atomic energy and others). And a good share of the remainder will affect our international relations and foreign policy (e.g., energy, agriculture, geophysics) when the R. & D. comes to fruition. And, hardest of all to define, many R. & D. projects are not being done at all that could affect the world and our policies favorably."

Dr. James R. Killian, Jr. (author of the National Academy of Sciences "Report on Science and Technology in Presidential Policymaking"):

"I have suggested the importance of the advisory mechanism's being closely related to other agencies in the Executive Office of the President. It would be my judgment that the head of this advisory mechanism should be a member of the Domestic Council and he should be, if not a member of the National Security Council, closely related to its work.

"I found in a number of experiences when I was Science Adviser to the President, being present at a meeting of the National Security Council enabled me at that time to point out to the President certain policy questions that were under consideration where there was a component involving science and technology that would not be normally recognized. I found that to be, and I think the President found that to be a important way in which the Science Adviser could operate.

"The advisory mechanism, working with the National Security Council and the Department of State, should also be able to contribute to those areas of foreign policy strongly affected by scientific and technological considerations. And finally, the advisory mechanism should cooperate closely with the Office of Management and Budget on significant budget and management issues involving science and technology.

". . . I do also feel that there should be an annual report of a very special kind prepared by the mechanism created in the White House. I know that it is difficult to contemplate any kind of comprehensive report on the state of science in the country. That is not what I am talking about. And that is not what the NAS Committee recommended.

"Rather, it was urging that there be an opportunity for this Science Adviser in the White House annually to submit to the President or to the Congress a statement of what he thinks are some of the acute and current problems that they should be aware of and to give attention to. And what are some of the budgetary problems that we face and problems of technology assessment.

". . . I think, for example, of the importance of a reordering of priorities which will enable our Government to generate and encourage new technologies which can contribute to the strength of our economy. Prof. Robert Gilpin of Princeton, an economist, in his report for the use of the Joint Economic Committee of the Congress, has presented an eloquent argument for rejuvenating our technological vitality through changes in the Nation's priorities in research and development funding. He has argued persuasively that priorities have been 'too much set by the cold war and a drive for national prestige.'

"I share that kind of comment; and I think we have a pressing opportunity to deal with this aspect of the Government's policies as related to science and technology.

"Next, the whole domain of national security, and I include in national security arms limitation, can benefit from objective scientific advice formulated at the level of the Presidency and outside of the Department of Defense and the Department of State.

"I am deeply disturbed by the amount of complacency in our country today in regard to the hazards involved in the arms race and in the proliferation of nuclear weapons. Scientists and engineers have an essential role to play in the formulation of policies with respect to the control of nuclear weapons. I find deeply disturbing recent suggestions that we might find it desirable to use nuclear tactical weapons and that a nuclear exchange could in any way be handled in an acceptable way.

". . . More stress, particularly in dealing with a relationship with the National Security Council, would be useful because I think if I were to have a general criticism of the House bill, it would be that it is somewhat bland with respect to the relationship of the proposed science adviser and his associates with the Domestic Council and with the National Security Council.

"And I think it is particularly important that the bill make clear that Congress expects a working relationship between those agencies as well as the OMB, or else this advisory mechanism can become isolated and is futile.

"So that is a very important point.

"We have had periods recently where I think this relationship with the National Security Council has become inoperative and ineffective in terms of the science advisory arrangement that then existed."

Dr. Roger Revelle (Chairman of the Board, American Association for the Advancement of Science):

"In the 'Statement of Findings and Declaration of Policy,' of S. 32, Federal funding for science and technology is referred to as an investment in the future which must be a 'continuing investment' because it is 'indispensable to sustained national progress.'

"The same idea is expressed differently in that 'the manpower pool of scientists and engineers constitutes an invaluable national resource which should be utilized to the maximum extent possible at all times."

"This view of Federal funding for science and technology as an investment instead of simply a component of current operating expenditures recognizes both the necessity of maintaining as much stability as possible in our national research effort and the hard truth that the benefits of research, though very great, will almost never be short-term ones.

"I do not want to imply that the budget for research and development should be sacred and unchanged from year to year.

"Much short-term development work can be postponed or put on the shelf when warranted by economic conditions. But long-term research and education which produce the intellectual capital for the future are investments that should be protected and sustained.

". . . The difficulty could be resolved if the Council of Advisers for the Office of Science and Technology had responsibility for recommending a long-term—say 5 years—investment program for science and technology, subject to the year-to-year fluctuations imposed by economic exigencies as reflected in the budget prepared by the Office of Management and Budget.

"The preparation of an investment program for science and technology would give genuine substance to the planning function envisioned in both H.R. 10230 and S. 32.

". . . A statement in the bill passed by Congress emphasizing that the scope of the Science Adviser's responsibilities should include the scientific and technological aspects of policies for national security and international relations and oversight of programs supporting these policies could be useful."

Dr. Thomas G. Fox (Science Adviser to the Governor of Pennsylvania):

"I think the key factor is that these bills provide at the Federal level the kind of input from State and local government we need. I refer to provisions like the one in S. 32 to provide an Intergovernmental Policy Council and to provide to the States some financial support from the Federal level to implement this program. If such provisions would be instituted, we indeed could move ahead very far and rapidly in establishing intergovernmental partnerships in managing the use of technology that are absolutely required.

". . . There are many States that are deeply into this with 10 years of positive experience. And there are a number of States that have studied what to do. For example, here is an excellent study by Puerto Rico on what they need to do, one by the State of California and one by Hawaii. I would say there are at least 20 or 30 States that have had good experience or have comprehensive and sophisticated studies of this question. I think we should move ahead and not wait."

GERALD R. FORD LIBRARY

Mr. Arthur P. Stern (President of the Institute of Electrical and Electronic Engineers):

". . . while it would be wrong to force on the President anything that he does not readily accept, it seems to me difficult to imagine that a science and technology policy adviser could be effective unless he sits on the Domestic Council and on the National Security Council, and unless he has a great say in international matters, because all these areas are permeated today by science and technology considerations—or they should be, if they are not—and science and technology are either there in the foreground, or certainly should be there in the background, of almost any important policy decision.

". . . Next, in comparing S. 32 with H.R. 10230, we found numerous differences. One of them was particularly striking.

"S. 32 mentions that "the pool of scientists and engineers is an invaluable national resource." It goes on at another point to state that "scientists and engineers must have continuing opportunities for socially useful employment in positions commensurate with their professional and technical capabilities."

"H.R. 10230 does not do any of this. Not only it doesn't do that, but a reference which was in the original text of H.R. 8058 and which was directed toward insuring the "full utilization of the technical manpower" of this country was stricken from the final text.

"We feel that it is inconceivable to make a major step toward recognizing science and technology and its central role in this country without looking out for the practitioners of science and technology. It is vital for this country, so that we maintain the leadership of which I talked before, that we attract the brightest, that we teach them well, that we give them appropriate rewards, and that we insure that they age in dignity.

"It is also important, in order to be able to do a good job in this area, that we establish an adequate data base to know where we stand and where we go with our scientific and engineering manpower.

". . . If the Science Adviser has no substantial influence on the budget process, then he becomes the decoration that I referred to before.

"The general intent of the Federal Government in science and technology is well and nice, but what really matters is what is getting done, and that which is being done is expressed in one way only—besides speeches—and that is money that is being spent.

"So I think the answer to that question must be strongly affirmative. The Science Adviser must have a role in budget preparation or else he will not be effective."

THE VICE PRESIDENT,
Washington, December 3, 1975.

Hon. EDWARD M. KENNEDY,
U.S. Senate,
Washington, D.C.

DEAR TED: It appears that we are drawing close to achieving our mutual objective of reestablishing an Office of Science and Technology Policy in the White House. I know you share my enthusiasm. I expect this office to be an important new source of advice for the President on the complex scientific and technological factors that arise in connection with a multitude of public issues.

This must be particularly gratifying to you in view of your many years of struggle in the Congress to establish a legislative framework for national science and technology policy and priorities, and also in view of the Senate's having passed your science and technology policy bill in two previous Congresses.

As you know, the House has recently passed H.R. 10230, which has many of the same objectives as your bill. We are now in a position to see these objectives implemented. The recent hearings which you, Senator Moss, and Senator Tunney chaired have provided even further momentum toward enactment of appropriate legislation.

Our discussions last spring, culminating in a conference with interested Senators in June, played an important part in achieving this result. I want to express again my personal appreciation to you for the initiative, candor, and cooperation you have exercised in dealing with this issue.

I know you will agree with me as to the urgency of completing Congressional action on this bill so that the new advisory machinery can be promptly installed in the White House. In order to expedite this matter, I respectfully recommend to you and your Senate colleagues that you consider accepting the House bill intact, without further alterations in the Senate. As you know, the President has indicated his willingness to accept the bill prepared by the House Committee on Science and Technology.

Of course, I realize from our discussions that you and your Senate colleagues may differ with respect to the details of a number of provisions in the House bill. However, in the future, there will undoubtedly be further opportunity to amend this legislation if our initial experience indicates that changes are desirable. Indeed it is my understanding that the House bill provides for establishing a committee to survey science and technology policy, programs, and organizations and to make recommendations for improvements within two years.

In any event, I hope you will agree with me that the overriding need at this time is to establish an Office of Science and Technology Policy in the Executive Office of the President as expeditiously as possible. In view of the already attenuated history of this legislation, efforts to amend the House bill in the Senate and the resultant need for a conference with the House could only lead to additional months of delay. Accordingly, I urge you to move for prompt Senate approval of the House bill.

Once again I want to express my personal thanks to you for your leadership in helping to achieve this goal of national significance. It has been my great honor and privilege to work closely with you on this issue.

Sincerely,

NELSON.

U.S. SENATE,
Washington, D.C., December 8, 1975.

Hon. NELSON A. ROCKEFELLER,
The Vice President, Washington, D.C.

DEAR MR. VICE PRESIDENT: Thank you for your letter regarding the re-establishment of an Office of Science and Technology Policy in the White House. I appreciate your generous comments about my role in this endeavor, in which I have greatly enjoyed working together with you. I believe our shared views on the importance of this activity to the nation have helped in building support for this legislation within the Congress and the Administration.

As you know, Senators Moss and Tunney have also played major leadership roles in the development of the Senate legislation. Accordingly, I have discussed your letter with them, and we have given a great deal of serious consideration to your recommendation that the Senate accept the House bill intact without further Senate amendments. In addition, we have discussed this matter with various leaders of the scientific and technical community.

Following these discussions, Senators Moss, Tunney, and I have concluded that there are a number of areas in which the House bill should be strengthened, and that it is in the national interest that we attempt to improve the legislation in the Senate. I would, of course, be happy to discuss the key provisions of the legislation with you, or to have our staffs go over the specific legislative proposals in detail.

And I can assure you that Senators Moss, Tunney, and I shall make every effort to move as expeditiously as possible toward prompt enactment of this legislation, so that the nation will soon be in a strong position to set its policies and priorities for science and technology.

It has been a great pleasure to work with you on this matter over the past year, and I look forward to our continued cooperation on this important issue.

With best wishes,

Sincerely,

EDWARD M. KENNEDY.

U.S. SENATE,
Washington, D.C., December 16, 1975.

Hon. FRANK CHURCH,
Chairman, Select Committee on Intelligence, U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: I am writing to request your opinion on a legislative matter to which your experience as Chairman of the Select Committee is highly relevant. This concerns S. 32, the National Policy and Priorities for Science and Technology Act.

Among other things, this bill re-establishes the position of a Science and Technology Adviser to the President. We have received recommendations from distinguished leaders of the scientific community that the bill stipulate that the Science Adviser to the President also serve as an adviser to the National Security Council on matters dealing with science and technology. It is their belief that the Science and Technology Adviser to the President could make a significant contribution to those deliberations of the National Security Council to which science and technology are relevant.

Subsection 207(b) of the bill has been drafted to reflect those recommendations. In drafting the subsection, we followed the relevant language of the comparable provision in the C.I.A. statute (50 U.S.C. 403 d(1)), which makes the Director of C.I.A. an adviser to the N.S.C. Attached is a copy of page 42 of the December 15, 1975 print of the bill, which contains that subsection. Attached also is a copy of the entire print of the bill for your reference.

I would greatly appreciate your views as to the desirability of having the Science and Technology Adviser to the President also serve as an adviser to the N.S.C., and any specific comments you might wish to make with regard to the particular subsection we have drafted.

Thank you very much for your attention to this matter.

Sincerely,

EDWARD M. KENNEDY.

COMMITTEE ON FOREIGN RELATIONS,
Washington, D.C., December 18, 1975.

Hon. EDWARD M. KENNEDY,
U.S. Senate,
Washington, D.C.

DEAR TED: This is in response to your inquiry of December 16 regarding the desirability of the Science and Technology Adviser to the President also serving as an adviser to the National Security Council (N.S.C.).

I think this is an extremely constructive suggestion and one which I personally endorse strongly, based on my experience as Chairman of the Select Committee on Intelligence. The National Security Council considers matters of the utmost national significance, frequently including issues to which scientific and technological factors are highly relevant. I believe the Science and Technology Adviser to the President could make a significant contribution to such deliberations and welcome the initiative you have taken in this regard. I have examined subsection 207(b) of your December 15, 1975 print of S. 32, which I understand is patterned after the C.I.A. statute, and consider it a suitable expression of the advisory func-

GERALD R. FORD LIBRARY

tion which the Science and Technology Adviser to the President should discharge with respect to the National Security Council.

Accordingly, I strongly support the inclusion of this provision in S. 32, and its approval by the Senate.

Sincerely,

FRANK CHURCH.

Mr. MOSS. Mr. President, the problem of establishing better mechanisms for the consideration of science and technology policy has been a continuing interest of the Senate for several years. Specifically, the matter became one of serious concern in early 1973 when President Nixon abolished the position of President's Science Adviser and, along with it, the Office of Science and Technology and the entire President's Science Advisory Committee. There were many people who were dismayed by this action, since it wiped out a science advisory mechanism that had been evolving since World War II. This action took us back to "square one", as they say, and left the White House bereft of any science advice whatsoever.

True, some of the functions were transfered to the National Science Foundation, and the Director of NSF sort of became the Science Adviser in absentia, but as I have said several times, the President needs his principal advisers "down the hall, not down the mall."

Among those who became worried about this matter was the prestigious National Academy of Sciences. Soon after President Nixon's actions, the Academy appointed a blue ribbon ad hoc Committee on Science and Technology chaired by President Eisenhower's first science adviser, Dr. James R. Killian. That committee studied the matter for a year and, to no one's surprise, recommended that a science and technology office be reestablished in the White House. However, they did prepare a thoughtful report which fully explored the issues and fully explained the reasons for their recommendations.

The history of what has happened since then has been told many times, but a significant development occurred when President Ford announced on May 22, 1975, his approval of a proposal prepared by Vice President ROCKEFELLER to reestablish the Office of Science and Technology in the Executive Office of the President and to do so by legislation. The President decided in favor of a single director with a small staff, rather than a council, but the restoration of a scientific presence in the White House was virtually assured by this decision.

Mr. President, we have finally emerged with a pretty good bill but it has taken an inordinate amount of effort and more than 8 months to accomplish what should have been done in a few weeks. I am proud of the bill that has emerged, but I am not proud of the way in which it was accomplished. I sincerely hope that we can evolve better procedures for handling these matters in the future.

Now, let me say a word or two about what I think will be the future impact of this bill. First of all, I think that every scientist and engineer in this country, and every professional organization and technologically oriented business will heave an audible sigh of relief to see the reestablishment of this important science presence in the White House. Of course, the President must still appoint his adviser, and that person must have the real trust of the President in order to be maximally effective in the job, but at least he or she will be in the White House.

Second, mechanisms will be reestablished whereby scientists and engineers, professional societies and corporations can make orderly inputs into the decisionmaking process on matters of science and technology policy.

Mr. President, the passage of this bill by the Senate is an important step forward for science and technology and the future security and economic well-being of this country.

Mr. GOLDWATER. Mr. President, I support S. 32, because it is the only attainable bill given joint referral to three committees.

My only concern has been to provide the President with the kind of scientific advice he desires. I believe it is a mistake to try to dictate to any President how he should organize the White House staff. I believe the President should be permitted a high degree of flexibility, short of extravagance.

I have two objections to S. 32 that I shall not press:

First, section 204 requires 5-year forecasts of science and technology funding. I believe this is impractical in the real world, because a shift in priorities may be needed. Also, there is the problem of new starts.

Second, title V anticipates the work of the President's Advisory Committee created under title III. If title V should be brought into being, I believe the Advisory Committee should develop the proposal.

The Senators and staffs of the three committees exercising jurisdiction over S. 32 deserve a lot of credit for trying to reach a compromise, especially because there have been strong views on sections of this bill.

Mr. President, I would like to propound a question to the distinguished chairman of the Aeronautical and Space Sciences Committee concerning section 208 of the bill under consideration. It is my understanding that annual reports on science and technology have been tried in the past and have not been very successful. The subject is way too broad to be dealt with in one report.

I am also concerned that an annual report from the President's Science Adviser might use up too much staff time and detract from the real job of giving the President the advice he deems necessary.

My question to the chairman is in two parts: Would he agree that section 208 does not call for an all-inclusive annual report? Would he be willing to see the report limited to selected aspects of scientific and technical activities which would be of real interest to the President and the Congress?

Mr. MOSS. Mr. President, may I say to my good friend from Arizona that the answer to both questions is yes. While I believe the Congress should be kept informed annually of the important activities of OSETP, I certainly would not want to put an unrealistic or burdensome requirement on what should be a small staff. I would hope that the President and the Director of the new office would be selective in their annual reports and not burden the taxpayers with paying for the publishing of a document that resembles the Encyclopedia Britannica.

Mr. LAXALT. Mr. President, S. 32, the National Policy, Organization and Priorities for Science, Engineering, and Technology Act of 1976, is the product of long and arduous negotiations and compromises. The bill was referred jointly to three committees and as a result, a balancing act of conflicting interests was inevitable. In deference to those compromises, I support passage of S. 32. I do feel compelled, however, to voice my concern for what I consider to be some of the remaining deficiencies of the bill. It is my expectation that these problems will be resolved in conference.

Title V, the State and regional science and technology program, is, in my view, of somewhat questionable value. Considerable evidence indicates that science advisory mechanisms which are general in nature and which are not closely linked into the policy process in State government are generally not very effective. A soon-to-be completed study of the science and technology mechanism experiences in the 50 States, being undertaken under the auspieces of the Council of State Governments, supports this conclusion.

At the very least, we should await the findings of the President's Advisory Committee on Science, Engineering and Technology. One of the purposes of this committee, created by title III of this bill, is to consider the need for stimulating more effective Federal-State liaison and cooperation in science, engineering and technology. I am concerned that section 501 which creates a 59-member intergovernmental science and technology advisory group does not adequately address those considerations.

Section 503 which creates a new categorical grant program to put new science advisory posts in each State, also tends to ignore much of the experience we have acquired in previous science advice experiences. The intergovernmental program of the National Science Foundation—NSF—has arranged for science advisers to Governors, but the results have not been uniformly successful. The current thrust of the NSF program which focuses on selected problems of national importance, is in my view, the most cost effective means for yielding timely and practical solutions for State science problems. We might also note that revenue sharing provides additional discretionary funds, if States wish to have science advisers.

Finally, we must bear in mind that the mechanisms which we have created will be effective only if they match the organizational and personal needs of the President. I caution against imposing undue restrictions and burdens on his activity.

GERALD R. FORD LIBRARY

I have every hope that the conference committee will address these issues, but at the same time, I reserve the right to oppose an unsatisfactory report.

The PRESIDING OFFICER. The question is on agreeing to the committee amendment in the nature of a substitute.

The committee amendment in the nature of a substitute was agreed to.

The PRESIDING OFFICER. The question is on the engrossment and third reading of the bill.

The bill was ordered to be engrossed for a third reading and was read the third time.

Mr. ROBERT C. BYRD. Mr. President, I ask unanimous consent that the Committee on Labor and Public Welfare, the Committee on Commerce, and the Committee on Aeronautical and Space Sciences be discharged from further consideration of H.R. 10230, and that the Senate proceed to its immediate consideration.

The PRESIDING OFFICER. Without objection, it is so ordered. The bill was stated by title.

The assistant legislative clerk read as follows:

A bill (H.R. 10230) to establish a science and technology policy for the United States, to provide for scientific and technological advice and assistance to the President, to provide a comprehensive survey of ways and means for improving the Federal effort in scientific research and information handling, and in the use thereof, to amend the National Science Foundation Act of 1950, and for other purposes.

The PRESIDING OFFICER. Without objection, the Senate will proceed to the consideration of the bill.

Mr. ROBERT C. BYRD. Mr. President, I move to strike all after the enacting clause of H. R. 10230, and to substitute the text of S. 32, as amended.

The PRESIDING OFFICER. The question is on agreeing to the motion of the Senator from West Virginia.

The motion was agreed to.

The PRESIDING OFFICER. The question is on the engrossment of the amendment and the third reading of the bill.

The amendment was ordered to be engrossed and the bill to be read a third time.

The bill was read the third time.

The PRESIDING OFFICER. The bill having been read the third time, the question is, Shall it pass?

The bill (H.R. 10230) was passed.

Mr. ROBERT C. BYRD. Mr. President, I ask unanimous consent to indefinitely postpone S. 32.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. MANSFIELD. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will please call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

INTERNATIONAL SECURITY ASSISTANCE AND ARMS EXPORT CONTROL ACT OF 1975

Mr. MANSFIELD. Mr. President, I ask unanimous consent, in accordance with what I previously said to the Senate, that the Senate now turn to the consideration of Calendar No. 579, S. 2662, so that it may become the pending business.

The PRESIDING OFFICER. The bill will be stated by title.

The legislative clerk read as follows:

A bill (S. 2662) to amend the Foreign Assistance Act of 1961 and the Foreign Military Sales Act, and for other purposes.

The PRESIDING OFFICER. Is there objection to the immediate consideration of the bill?

Mr. HELMS. Mr. President, reserving the right to object, with all respect to the able majority leader, the haste in which this measure is being taken up gives me some concern. First of all, it is a rather massive document, I would say to the distinguished majority leader. It is 118 pages long. The report on the bill is 140 pages long. Neither these documents was available in print until yesterday. Now it is common knowledge that S. 2662 is no routine measure authorizing international security assistance. On page 4 of the report it says bluntly:

This bill, when enacted, will constitute the most significant piece of legislation in the field of military assistance policy since the enactment of the Mutual Security Act more than a quarter of a century ago.

In other words, it is nothing less than a revolutionary piece of legislation, coming at a time of upheaval and uncertainty in the field of international relations. The distinguished members of the Foreign Relations Committee have given a great deal of time and thought in preparing this legislation. It is legislation that deserves careful appraisal and reasoned examination of its constituent parts.

I hope that the distinguished majority leader will give us an idea of what the plans may be in connection with consideration of this bill.

Mr. MANSFIELD. May I say to the distinguished Senator from North Carolina that I have been approached by a number of Senators who indicated they did not wish a time limitation and by a few others who indicated they were considering the possibility of having the bill referred to the Committee on Armed Services because of certain sections which they think is within the purview of that committee's responsibility. I anticipate, if we are fortunate enough to have it laid down this afternoon, that we would at best only get started. There would be no votes. I am informed there are a number of amendments at the desk. One Member, I think, has seven amendments. So, it looks to me as if it will take some time.

Mr. HELMS. In other words, the able Senator is saying this probably will be carried over until the Senate returns after next week's recess; is that correct?

Mr. MANSFIELD. It is quite possible, unless the Senate in its wisdom decides otherwise and seeks to dispose of it before we go into a week's recess, to commemorate the memory of Abraham Lincoln. Of course, the Senator knows I cannot say what the Senator will do.

Mr. HELMS. I understand, and I appreciate the Senator's problem in trying to keep legislation moving. However, undue haste in this particular instance could be exceedingly detrimental in a great many ways.

Mr. TOWER. Mr. President, if the Senator will yield, I concur with what the Senator from North Carolina has said. This is a bill of very far-reaching import. In my view, the provisions of this bill, if adopted, will make the French the greatest munitions merchants in the world, maybe the leading munitions producer of all the world because this will so severely restrict American sales of American munitions abroad and so severely limit it that we will be out of the international arms business.

There are a lot of people who moralize about our selling arms abroad, but I think that there are two facts that remain clear.

I know we cannot morally justify it on the grounds that if we do not sell it to them the French will, or the British will, or someone else will. That is no moral justification, true. The fact of the matter is, if we sell arms, we have some control over their use, we have control over the spare parts and the maintenance, and we maintain some degree of American influence.

So I think that we need to consider this very carefully, and I for one urge that this bill be referred to the Committee on Armed Services. For one thing, there are serious implications in terms of arms costs for the United States. Everyone knows that, if we can sell American aircraft abroad, it reduces per unit cost of that aircraft in terms of our own defense procurement and, in some instances, helps sustain a production base that our own purchases alone will not sustain.

This is a bill of very serious implications, and I hope the Senate will act carefully on it. I hope that it can be referred to the Committee on Armed Services, but I for one am prepared to debate it extensively until such time as every Senator has had an opportunity to familiarize himself with it and what the implications are. So, I hope that we will not try to hurry consideration of this measure.

Mr. HELMS. Mr. President, I suggest the absence of a quorum while we discuss this matter further. Perhaps we can reach an understanding.

The PRESIDING OFFICER. The clerk will call the roll.

The second assistant legislative clerk proceeded to call the roll.

Mr. HELMS. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. HELMS. Mr. President, in con-