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Tuesday 11/12/74

4:15 Dr. Marrs was discussing S. 32. Said he has no axe to grind other than he's interested in it.

Said his friends on the House side tell him they're going to pass it in the lame duck session. Said he'd hate to see this project fouled up with some of the old traditionalists who have messed this area up before. May need some help from the President.

Said he has no personal aspirations. "If I could try to insure that we get really challenging people in these three roles, I think we could really make it work ---- it's going to fly."

Might fit into his job description because he's been working in the Academy of Science -- helped write the bill.



Science

11/12/74

To: Dr. Marra

From: Eva Daughtrey

Attached is a copy of
S. 32, which Ralph Clark
called Mr. Buchen about.



Science

Tuesday 11/12/74

11:15 As requested by Mr. Buchen, I called Ralph Clark's office to suggest that he contact

**Dr. Theodore C. Marrs
Special Assistant to the President
Rm. 103 Executive Office Building**

456-2335

Mr. Clark had wanted to talk with Mr. Buchen about science policy and organization and S. 32. Said some engineering societies are getting interested in this bill that was passed by the Senate.

Mr. Clark was out and will call back.

11:55 Advised Mr. Clark that he should contact Dr. Marrs and gave him the phone number and address.



Thursday 11/7/74

12:40 Ralph Clark would like to talk with you about science policy and organization and S. 32. Said some engineering societies are getting interested in this bill that was passed by the Senate. 785-0017

IN THE HOUSE OF REPRESENTATIVES

OCTOBER 15, 1974

Referred to the Committee on Science and Astronautics

AN ACT

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

1 *Be it enacted by the Senate and House of Representa-*

2 *tives of the United States of America in Congress assembled,*

3 That this Act may be cited as the "National Policy and

4 Priorities for Science and Technology Act of 1974".

5 STATEMENT OF FINDINGS AND DECLARATION OF POLICY

6 SEC. 2. (a) The Congress, recognizing the profound

7 impact of science and technology on society, and the inter-

8 relations of scientific, technological, economic, social, polit-

9 ical, and institutional factors, hereby finds that—

10 (1) Federal funding for science and technology rep-



1 resents an investment in the future, which is indispens-
2 able to sustained national progress;

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

6 (3) the scientific and technological capabilities
7 within the United States, if properly applied and di-
8 rected, could effectively assist in improving the quality
9 of life and in anticipating and resolving many critical
10 and emerging national problems;

11 (4) strong participation by State and local govern-
12 ments is essential to the successful solution of many civil-
13 ian problems, and in developing programs for the appli-
14 cation of science and technology to civilian needs and
15 to setting civilian research and development activities
16 priorities;

17 (5) the maintenance and strengthening of diver-
18 sified scientific and technological capabilities in govern-
19 ment, industry and the universities, and the encourage-
20 ment of independent initiatives based on such capabilities,
21 are essential to the most effective use of science and
22 technology in resolving critical and emerging national
23 problems;

24 (6) a more systematic approach is needed to iden-

1 tify critical and emerging national problems and to an-
2 alyze, plan, and coordinate Federal science and tech-
3 nology programs, policies, and activities intended to
4 contribute to the resolution of such problems; and

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

12 (b) The Congress declares that it is the continuing
13 policy and responsibility of the Federal Government to take
14 appropriate measures directed toward achieving the follow-
15 ing goals—

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

19 (2) the level of this investment must be adjusted
20 annually with regard to particular needs and opportuni-
21 ties and the prevalent economic situation;

22 (3) the Federal investment in science and technol-
23 ogy must be allocated annually among the priority needs
24 of the Nation, including the need to maintain the Na-

1 tion's strength in basic research and education in science
2 and engineering;

3 (4) scientists, engineers, and technicians must have
4 continuing opportunities for socially useful employment
5 in positions commensurate with their professional, tech-
6 nical capabilities; and

7 (5) the National capabilities for technological plan-
8 ning and policy formulation must be strengthened.

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

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

16 (2) establishing an Intergovernmental Science and
17 Technology Advisory Committee to foster the applica-
18 tion of science and technology to State and regional
19 needs;

20 (3) establishing an Interagency Federal Coordinat-
21 ing Committee on Science and Technology to coordinate
22 agency research and development efforts; and

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

1 TITLE I—COUNCIL OF ADVISERS ON
2 SCIENCE AND TECHNOLOGY

3 ESTABLISHMENT OF COUNCIL

4 SEC. 101. (a) There is established in the Executive
5 Office of the President a Council of Advisers on Science and
6 Technology (hereinafter referred to as the "Council"). The
7 Council shall be composed of three Members who shall be
8 appointed by the President, by and with the advice and
9 consent of the Senate from among individuals who, by
10 reason of their training, experience, and attainments, are
11 exceptionally qualified to analyze and interpret scientific
12 and technological developments; to appraise and recommend
13 programs, policies, and activities of the Federal Government
14 in the light of the policy declared in section 2; and are sen-
15 sitive to the economic, social, esthetic, and cultural needs and
16 interests of the Nation.

17 (b) The President shall designate one of the mem-
18 bers of the Council as Chairman and one as Vice Chairman,
19 who shall act as Chairman in the absence of the Chairman.

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

1 compensated at the rate provided for level IV of the Execu-
2 tive Schedule (5 U.S.C. 5315).

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

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

16 FEDERAL INVESTMENT IN SCIENCE AND TECHNOLOGY

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

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

1 Congress regarding the desired level of Federal investment in
2 science and technology for the fiscal year immediately follow-
3 ing the fiscal year in which such recommendations are made.

4 SCIENCE AND TECHNOLOGY PRIORITIES

5 SEC. 103. (a) The Council shall annually assess alterna-
6 tive uses of Federal funds for science and technology in rela-
7 tion to scientific and technical opportunities and national
8 needs, and on the basis thereof shall determine a set of prior-
9 ities for allocating Federal funds among major expenditure
10 areas in science and technology, which pertain to the fiscal
11 year immediately following the fiscal year in which such
12 determination is made.

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

16 SCIENCE AND TECHNOLOGY POLICY ANALYSIS AND

17 PLANNING

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

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

1 logical responsibilities and programs of the Federal de-
2 partments and agencies in the resolution of such
3 problems;

4 (2) assist and advise the President in the prepara-
5 tion of the Science and Technology Report, in accordance
6 with section 108 of this title;

7 (3) gather timely and authoritative information con-
8 cerning significant developments and trends in science,
9 technology, and in national priorities, both current and
10 prospective, to analyze and interpret such information
11 for the purpose of determining whether such develop-
12 ments and trends are interfering, or are likely to in-
13 terfere, with the achievement of the policy set forth in
14 section 2 of this Act;

15 (4) initiate studies and analyses, including sys-
16 tems analyses and technology assessments of alternatives
17 available for the resolution of critical and emerging
18 national problems amenable to the contributions of
19 science and technology and, insofar as possible, determine
20 and compare probable costs, benefits, and impacts of
21 these alternatives;

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

1 grams, policies, and activities are contributing to the
2 achievement of such policy, and to make recommenda-
3 tions to the President with respect thereto;

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

7 (7) perform other duties and functions and make
8 and furnish such studies, reports thereon, and recom-
9 mendations with respect to matters of policy and legis-
10 lation as the President may request.

11 FUNCTIONS OF THE CHAIRMAN

12 SEC. 105. The Chairman of the Council shall, in addi-
13 tion to the other duties and functions set forth in this title—

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

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

19 (3) appoint, assign the duties, and fix the compen-
20 sation of personnel without regard to the provisions of
21 title 5, United States Code, governing appointments in
22 the competitive service, and without regard to the pro-
23 visions of chapter 51 and subchapter III of chapter 53
24 of such title, relating to classification and General Sched-

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

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

6 COORDINATION WITH OTHER ORGANIZATIONS

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

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

11 (2) utilize the services of consultants, establish such
12 advisory committees, and, to the extent practicable, con-
13 sult with State and local governmental agencies, with
14 appropriate professional groups, and with such repre-
15 sentatives of industry, the universities, agriculture, labor,
16 consumers, conservation organizations, and other groups,
17 organizations and individuals as it may deem advisable;

18 (3) hold such hearings in various parts of the Na-
19 tion as the Council deems necessary, to determine the
20 views of such agencies, groups, and organizations re-
21 ferred to in paragraph (2) of this subsection and of the
22 general public, concerning trends in science and tech-
23 nology; and

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

1 information) of public and private agencies and orga-
2 nizations, and individuals, in order that duplication of
3 effort and expense may be avoided.

4 (b) Each department, agency, and instrumentality of
5 the executive branch of the Government, including any inde-
6 pendent agency, is authorized to furnish the Council such
7 information as the Council deems necessary to carry out its
8 function under this title.

9 (c) Upon request, the Administrator of the National
10 Aeronautics and Space Administration is authorized to assist
11 the Council with respect to carrying out its activities con-
12 ducted under paragraph (4) of subsection 104(a) of this
13 title.

14 STUDY OF FEDERAL ORGANIZATION FOR SCIENCE AND
15 TECHNOLOGY

16 SEC. 107. (a) Not later than ninety days following ap-
17 pointment of the Council members the Council shall con-
18 tract with the National Academy of Sciences to conduct a
19 study in order to recommend improvements in the Federal
20 organization for civilian science and technology.

21 (b) Such contract shall contain provisions to assure
22 that the study takes adequate account of the impact of Fed-
23 eral scientific and technical programs on—

24 (1) the generation of scientific and technical knowl-
25 edge;

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

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

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

7 (5) the quality of the environment; and

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

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

11 (1) examination and appraisal of the existing Fed-
12 eral organization for civilian science and technology;

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

15 (3) consideration of the establishment of such new
16 departments, agencies, offices, or other organizations as
17 may serve to strengthen the Nation's scientific and tech-
18 nical enterprise and increase the effectiveness of its ap-
19 plication to the solution of national problems.

20 (d) In conducting its study, the Academy shall make
21 maximum feasible use of related investigations and studies
22 conducted by public and private agencies, including congres-
23 sional hearings and reports.

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

1 a final report, containing detailed statements of the findings
2 and conclusions of the Academy, together with its recom-
3 mendations for improvements in the Federal organization for
4 civilian science and technology.

5 SCIENCE AND TECHNOLOGY REPORT

6 SEC. 108. (a) The President shall transmit annually to
7 the Congress, beginning October 15, 1975, a Science and
8 Technology Report (hereinafter referred to as the "Report").
9 which shall set forth—

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

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

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

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

25 (5) the identification and assessment of scientific

1 and technological measures that can contribute to the
2 resolution of such problems, in light of the related social,
3 economic, political, and institutional considerations;

4 (6) the existing and projected scientific and tech-
5 nological resources, including specialized manpower, that
6 could contribute to the resolution of such problems;

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

10 (8) recommendations with regard to Federal in-
11 vestment level and priorities in science and technology,
12 as made by the Council pursuant to sections 102 and
13 103 of this title.

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

16 (c) If the recommendations in the report regarding Fed-
17 eral investment level and priorities in science and technology
18 are substantially different from those submitted by the Council
19 to the President, then the report shall include an appendix
20 containing the original recommendations of the Council to the
21 President, along with the Council's supporting justification
22 and the reasons why the President did not accept the recom-
23 mendations as submitted.

1 TITLE II—FEDERAL COORDINATING COMMITTEE
2 FOR SCIENCE AND TECHNOLOGY

3 ESTABLISHMENT AND FUNCTIONS OF FEDERAL COORDINAT-
4 ING COMMITTEE FOR SCIENCE AND TECHNOLOGY

5 SEC. 201. (a) There is established the Federal Co-
6 ordinating Committee for Science and Technology (herein-
7 after referred to as the "Committee").

8 (b) The Committee shall be composed of the Chairman
9 of the Council of Advisers on Science and Technology and
10 one representative of each of the following: Department
11 of Agriculture, Department of Commerce, Department of
12 Defense, Department of Health, Education, and Welfare,
13 Department of Housing and Urban Development, Depart-
14 ment of the Interior, Department of State, Department of
15 Transportation, Veterans' Administration, Atomic Energy
16 Commission, National Aeronautics and Space Administra-
17 tion, National Science Foundation, Environmental Protection
18 Agency, and Energy Research and Development Agency.
19 Each such representative shall be an official of policy rank
20 designated by the head of the Federal agency concerned.

21 (c) The Chairman of the Council of Advisers on Sci-
22 ence and Technology shall serve as Chairman of the Com-
23 mittee. The Chairman may make provision for another



1 member of the Council, to act temporarily as Chairman of
2 the Committee.

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

9 (e) The Committee shall consider problems and develop-
10 ments in the fields of science and technology and related ac-
11 tivities affecting more than one Federal agency, and shall
12 recommend policies and other measures—

13 (1) to provide more effective planning and admin-
14 istration of Federal scientific and technological programs,

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

17 (3) to achieve more effective utilization of the scien-
18 tific and technological resources and facilities of Fed-
19 eral agencies, including the elimination of unnecessary
20 duplication, and

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

23 (f) The Committee shall perform such other related
24 duties as shall be assigned, consonant with law, by the Presi-
25 dent or by the Chairman.

26 (g) For the purpose of effectuating this section, each

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

5 (1) detailing employees to the Committee to per-
 6 form such functions, consistent with the purposes of this
 7 section, as the Chairman may assign to them, and

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

11 (h) For the purpose of conducting studies and making
 12 reports as directed by the Chairman, standing subcommittees
 13 and panels of the Committee may be established in conso-
 14 nance with the provisions of section 214 of the Act of May 3,
 15 1945 (59 Stat. 134; 31 U.S.C. 691).

16 ABOLITION OF FEDERAL COUNCIL FOR SCIENCE AND
 17 TECHNOLOGY

18 SEC. 202. The Federal Council for Science and Tech-
 19 nology established pursuant to Executive Order 10807, dated
 20 March 13, 1959, as amended by Executive Order 11381,
 21 dated November 8, 1967, is hereby abolished.

22 TITLE III—NATIONAL SCIENCE FOUNDATION

23 NATIONAL SCIENCE POLICY

24 SEC. 301. Section 3 (d) of the National Science Founda-
 25 tion Act of 1950 is amended to read as follows:

1 “(d) The foundation shall recommend and encourage
2 the pursuit of national policies designed to foster research
3 and education in science and engineering, and the applica-
4 tion of scientific and technical knowledge to the solution of
5 national problems.”

6 NATIONAL SCIENCE BOARD

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

9 (1) by inserting before the period at the end of
10 subsection (a) a comma and the following: “within
11 the framework of applicable national policies as set
12 forth by the President and the Congress” and

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

15 “(c) The persons nominated for appointment as mem-
16 bers of the Board (1) shall be eminent in the fields of science,
17 social science, engineering, agriculture, industry, education,
18 or public affairs, (2) shall be selected solely on the basis of
19 established records of distinguished service, and (3) shall be
20 so selected as to provide representation of the views of leaders
21 from a diversity of fields from all areas of the Nation. The
22 President is requested, in the making of nominations of per-
23 sons for appointment as members, to give due consideration
24 to any recommendations for nomination which may be sub-

1 mitted to him by the National Academy of Sciences, the Na-
2 tional Academy of Engineering, the National Association
3 of State Universities and Land-Grant Colleges, the Sea
4 Grant Association, the Association of American Universities,
5 the Association of American Colleges, the Association of
6 State Colleges and Universities, or by other scientific, tech-
7 nical, public interest or educational associations.”

8

ASSISTANCE TO COUNCIL

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

11 (1) gather and analyze information regarding Fed-
12 eral expenditures for research and engineering activities,
13 and the employment and availability of scientific, en-
14 gineering, and technical manpower, which the Founda-
15 tion has assembled pursuant to paragraphs (1), (5),
16 (6), and (7) of section 3 (a) of the National Science
17 Foundation Act of 1950 in order to appraise the imple-
18 mentation of the policies set forth in section 2 of this
19 Act; .

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

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

1 CONTINUING EDUCATION IN SCIENCE AND ENGINEERING

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

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

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

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

15 (1) the development of special curriculums and
16 educational techniques for continuing education in sci-
17 ence and technology; and

18 (2) the award of fellowships to scientists and engi-
19 neers to enable them to pursue courses of study which
20 provide continuing education in science and engineering.

21 (c) From funds available pursuant to section 502, the
22 Foundation is authorized to make grants to, and to enter into
23 contracts with, institutions of higher education and other

1 academic institutions, nonprofit institutes and organizations,
2 and private business firms, for the purpose of developing
3 courses and curriculums specially designed for continuing
4 education in science and technology under this section.

5 (d) (1) From funds available pursuant to section 502
6 the Foundation is authorized to award continuing education
7 fellowships to scientists and engineers to enable them to pur-
8 sue appropriate courses of study.

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

11 (A) attract highly qualified applicants; and

12 (B) provide an equitable distribution of such fel-
13 lowships throughout the United States.

14 (3) The Foundation shall pay to persons awarded fel-
15 lowships under this section such stipends (including such
16 allowances for subsistence, health insurance, relocation ex-
17 penses, and other expenses for such persons and their
18 dependents) as it may prescribe by regulation designed to
19 accomplish the purposes of this Act.

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

1 TITLE IV—STATE AND REGIONAL SCIENCE
2 AND TECHNOLOGY PROGRAMS

3 ESTABLISHMENT OF INTERGOVERNMENTAL SCIENCE AND
4 TECHNOLOGY ADVISORY COMMITTEE

5 SEC. 401. (a) There is established in the National
6 Science Foundation an Intergovernmental Science and Tech-
7 nology Advisory Committee. †

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

10 (1) Twenty members, two from each of the stand-
11 ard Federal regions, shall be appointed by the President,
12 by and with the advice and consent of the Senate;

13 (2) A member of the Council selected by the Chair-
14 man of the Council; and

15 (3) The Director of the Foundation.

16 In making appointments under clause (1) of this subsection,
17 the President is requested to consider the appointment of in-
18 dividuals who, by reason of education, experience, or interest,
19 are especially qualified to serve on the Committee and to
20 give due consideration to nominations received from the
21 Council of State Governments, National Governors' Con-
22 ference, National Conference of State Legislatures, Interna-
23 tional City Management Association, National League of
24 Cities/United States Conference of Mayors, National As-

1 sociation of County Officials, and other public interest
2 organizations.

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

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

10 (2) any member appointed to fill a vacancy occur-
11 ring prior to the expiration of the term to which his
12 predecessor was appointed shall be appointed for the
13 remainder of such term.

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

FUNCTIONS OF THE COMMITTEE

1
2 SEC. 402. (a) The Committee shall advise and assist the
3 Foundation in—

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

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

11 (3) identifying and fostering ways to facilitate the
12 transfer and utilization of results of civilian research
13 and development activities so as to maximize the appli-
14 cation of science and technology to civilian needs.

15 (b) The Committee is authorized to—

16 (1) assist the Director of the Foundation, as appro-
17 priate, in taking account of State and regional needs and
18 opportunities in the formulation of the Foundation's
19 plans and programs;

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

23 (3) develop and furnish to the States, at their re-
24 quest, advisory guidelines for the formulation of civilian

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

3 (4) review and evaluate the effectiveness of pro-
4 grams and activities assisted under this title; and

5 (5) prepare and furnish to the Director of the Foun-
6 dation for incorporation into the annual report of the
7 Foundation to the Congress, a report of the activities of
8 the Committee under this title, together with such recom-
9 mendations, including recommendations for additional
10 legislation, as the Committee deems appropriate.

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

13 (2) The Committee shall meet at the call of the Chair-
14 man, but not less than four times a year.

15 (3) The Foundation shall make available to the Com-
16 mittee such information and assistance as may be required
17 to carry out its functions under this section.

18 **ADMINISTRATIVE PROVISIONS**

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

22 (1) appoint and fix the compensation of an execu-
23 tive director, and such additional staff personnel as he
24 deems necessary, without regard to the provisions of

1 title 5, United States Code, governing appointments in
2 the competitive service, and without regard to the pro-
3 visions of chapter 51 and subchapter III of chapter 53
4 of such title relating to classification and General Sched-
5 ule pay rates, but at rates not in excess of the maximum
6 rate for GS-18 of the General Schedule under section
7 5332 of such title, and

8 (2) procure temporary and intermittent services to
9 the same extent as is authorized by section 3109 of title
10 5, United States Code.

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

17 GRANTS FOR STATE SCIENCE AND TECHNOLOGY PROGRAMS

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

24 (b) No grant may be made under this section unless
25 an application is submitted at such time in such manner

1 and containing or accompanied by such information as the
2 Director after consultation with the Committee requires. Each
3 such application shall contain provisions to assure that—

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

13 (2) the State will assume the cost of the office es-
14 tablished pursuant to this title no later than two years
15 after the year in which the application is made.

16 (c) The Director shall approve any application which
17 meets the requirements of subsection (b), and shall not dis-
18 approve any application without affording an opportunity
19 for a hearing.

20 TITLE V—GENERAL PROVISIONS

21 DEFINITIONS

22 SEC. 501. As used in this Act:

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

1 (2) The term "Foundation" means the National Sci-
2 ence Foundation.

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

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

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

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

13 (C) Region III: Delaware, the District of Colum-
14 bia, Maryland, Pennsylvania, Virginia, and West Vir-
15 ginia.

16 (D) Region IV: Alabama, Florida, Georgia, Ken-
17 tucky, Mississippi, North Carolina, South Carolina,
18 and Tennessee.

19 (E) Region V: Illinois, Indiana, Michigan, Min-
20 nesota, Ohio, and Wisconsin.

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

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

3 (H) Region VIII: Colorado, Montana, North Da-
4 kota, South Dakota, Utah, and Wyoming.

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

7 (J) Region X: Alaska, Idaho, Oregon, and Wash-
8 ington.

9 AUTHORIZATION OF APPROPRIATIONS

10 SEC. 502. (a) There are authorized to be appropriated
11 \$8,000,000 for the fiscal year ending June 30, 1975, of
12 which \$1,500,000 shall be available to carry out the provi-
13 sions of section 107 of title I, \$2,500,000 shall be available
14 to carry out the other provisions of title I, \$1,500,000 shall
15 be available to carry out the provisions of title III, and
16 \$2,500,000 shall be available to carry out the provisions
17 of title IV; and \$14,000,000 for the fiscal year ending
18 June 30, 1976, of which \$5,000,000 shall be available to
19 carry out the provisions of title I, \$3,500,000 shall be avail-
20 able to carry out the provisions of title III, and \$5,500,000
21 shall be available to carry out the provisions of title IV.

1 (b) Funds appropriated pursuant to subsection (a) of
2 this section shall remain available for obligation, for expendi-
3 ture, or for obligation and expenditure, for such period or
4 periods as may be specified in Acts making such appropria-
5 tions.

Passed the Senate October 11, 1974.

Attest:

FRANCIS R. VALEO,

Secretary.

November 12, 1974

To: Dr. Marrs

From: Eva Daughtrey

Attached is the one-page
resume for Dr. George Mansur.

I will get you a longer version
pronto!!

Thanks.



Biographical Sketch

Dr. George F. Mansur, Jr.

Dr. Mansur received his Bachelor of Science degree in 1949 and the Master of Science degree in 1956, both in electrical engineering from the University of Missouri. He received his Ph.D. in electrical engineering from Iowa State University in 1963.

Following his graduation in 1949, Dr. Mansur joined Emerson Electric Company of St. Louis, Missouri, and subsequently in 1952, the Signal Corps Engineering Laboratories as a member of the armed services. He joined Collins Radio Company in 1953 and in 1964 directed Collins activities in the successful competition for the Apollo Manned Space Flight Network for NASA, and served as Program Manager until completion of the program. During this period he was promoted to Director of Space Systems Division and in 1969 was appointed Director of Microwave and Space Systems when the two organizations were merged. Dr. Mansur was responsible for the division's operating budget and the product line margins. The division had sales of approximately \$40 million annually in both government and commercial systems and products. Because of its nature as a system engineering organization, all principal technical disciplines were represented.

In 1970 Dr. Mansur was appointed Deputy Director of the Office of Telecommunications Policy. The Office serves as a principal policy advisor to the President on national and international telecommunication matters, and as a result, Dr. Mansur has worked closely with industry and key government agencies.

Dr. Mansur joined the Martin Marietta Corporation in April, 1972 where he is currently Director of Communications and Electronics. His responsibilities include new product definition and development, contract management, both commercial and government, and budget responsibility for an organization of approximately 500 personnel.

In 1969 he was given NASA's Public Service Award "for his outstanding contributions as a key leader of the government-industry team which made possible the exceptional success of the Apollo program," and recently received the Missouri Honor Award for Distinguished Service in Engineering. He holds several classified patents and is the author of a number of papers and addresses.



8:00 Dec. 10

National Medal of Science

National Science Foundation

Sunday Times

Thing of Brookhaven
Called Ted Morts

11/21/74



Phil —

As 2 indicated, papers will
become fun OMS.
In the meantime you might
want to schedule this meeting with Wlesner.
I'll join in if you like

Phil A.

THE WHITE HOUSE
WASHINGTON

Phil A:

Jerry Weisner
will want to talk
about ~~esta~~ re-establishing
the office of Science
Advisor to the President,
I believe.

Any suggestions as
to other persons I should
involve or refer him to?
Or as to the merits of
the idea.

P.



OFFICE OF THE PRESIDENT

CAMBRIDGE, MASSACHUSETTS 02139

November 13, 1974

The Honorable Philip W. Buchen
Counsel to the President
The White House
Washington, D. C.

Dear Mr. Buchen:

I plan to be in Washington on December 10th for a meeting of the Office of Technology Assessment and would like to drop by if that is convenient. I could do this early in the morning or at any time until about 4 p. m. I must leave Washington for Dullas Airport about 4:30 p. m.

Sincerely yours,

Jerome B. Wiesner
President

JBW/jh



RALPH L. CLARK
4307 NORTH 39TH STREET
ARLINGTON, VIRGINIA 22207

November 18, 1974

The Honorable Philip W. Buchen
Counsel to the President
The White House
Washington, D.C. 20500

Dear Phil:

Eva put me in touch with Ted Marrs and he was most helpful. The Engineering and Scientific societies are very concerned that adequate consideration of national policy and planning be given to the scientific and engineering aspects of our many national problems.

Dr. Stever, the Director of the National Science Foundation, who has been filling the role of Science Advisor to the President since Mr. Nixon abolished the Office of Science and Technology has, in our opinion, done a very creditable job under the circumstances. However, he is the Head of the very important agency of the Federal Government charged with the promotion of basic research which is essential to our continued national progress and competitive position in the world. These dual roles are too much to expect of one man.

Furthermore, under the present organizational structure, Dr. Stever has no opportunity to oversee the R&D activities of the Department of Defense and coordinate them with and judge their impact on the rest of scientific and technical activity of the government. The Defense Department manages the largest single R&D program supported by federal funding.

As I said in the letter to the President of August 21, 1974, the engineering and scientific societies are very interested in strengthening national policy with respect to science and technology and establishing an adequate organizational structure to insure its continued development and improvement.

I do not speak for the country's engineering societies but I have, I believe, a very good feel for what their leaders and senior members are concerned with and this generally accords with the conclusions of the report of the Killian Committee of the National Academy of Sciences: "Science and Technology in Presidential Policy Making-A Proposal" published this summer.



On October 11, the Senate passed S-32, the "National Policy and Priorities for Science and Technology Act of 1974." This Act would establish a Council of Advisors on Science and Technology in the Executive Office of the President. One of the members of this three-man council would be designated Chairman and would also serve as Science and Technology Advisor to the President and Chairman of the Federal Coordinating Committee for Science and Technology. The Act would create this Committee to coordinate scientific and technical and related activities affecting more than one federal agency. The Act would establish an Intergovernmental Science and Technology Advisory Committee including 20 members from the several federal regions to identify and define civilian problems at state, regional and local levels. The Committee would also establish priorities for study and development of policies and alternatives by the National Science Foundation to maximize the application of science and technology to civilian needs.

We feel that this bill is a very adequate vehicle for reestablishing scientific and engineering leadership within the Executive Office of the President. It gives the President ample opportunity to appoint the best men he can find to the Council and the Intergovernmental Committee and provides for the much needed expansion of cooperation and cross fertilization between federal science and engineering activities and those at state and local levels.

The engineering societies do not want to move in support of legislation with the Congress if the White House is planning independent action of its own to remedy this situation. We recognize that the President is concerned with many other very important domestic and international problems. Further we feel a legislative basis for science organization and policy is desirable and if the President were just to indicate to Chairman Teague that he would not object to or would support consideration of S-32 during this session the Congress might well complete action on this bill. This could demonstrate leadership on the part of the President and establish organizations which could be of major assistance to him during the balance of his present term. It could be done without significant cost to the federal budget.

The Federal Budget is probably the single most powerful instrument in guiding our national scientific and engineering efforts, particularly in critical fields like energy, transportation, preservation of the environment, and the continued growth of our technological position in world trade. To have the benefit of the advice of a council on science and technology in the preparation of the budget for fiscal year 1977, the Council would have to be established and get a running start on its problems by the second quarter of 1975.



If no action is taken during the balance of this present session of Congress, the Senate action, of course, becomes null and void, and the 94th Congress will have to start from scratch in consideration of new legislation dealing with science and technology policy and organization. Under these circumstances, a council is very unlikely to be established soon enough to have any effect on the preparation of the 1977 budget and it will be 1978 before significant impact could be achieved.

Sincerely,



Ralph L. Clark

cc: Theodore C. Marrs.



RALPH L. CLARK
4307 NORTH 39TH STREET
ARLINGTON, VIRGINIA 22207



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AMERICA-

NOV 18 '74
D. C.
UNITED STATES POSTAL SERVICE
7058768

The Honorable Philip W. Buchen
Counsel to the President
The White House
Washington, D. C. 20500

EXECUTIVE OFFICE OF THE PRESIDENT

OFFICE OF MANAGEMENT AND BUDGET

WASHINGTON, D.C. 20503

NOV 22 1974

MEMORANDUM FOR PHIL AREEDA

FROM: FRANK ZARB

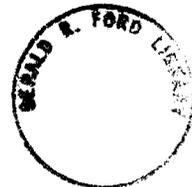
SUBJECT: PRESIDENT'S SCIENCE ADVISER

At your request, I have attached the following:

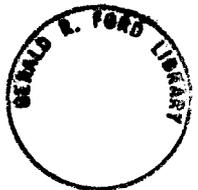
1. An options paper concerning the organization of science advisory apparatus. This paper has been in preparation for some time, but has not been sent to the President.
2. A discussion of what we believe is an appropriate mission for any science advisory mechanism.
3. A brief outline of the arguments raised against the former OST approach as well as the arguments that have been submitted in favor of it.

While the options paper does not put forth a recommendation, it is obviously only one of a number of alternatives which could work. It may be useful for me to visit with you early next week and discuss the subject more fully. I am at your service.

Attachments



1



THE WHITE HOUSE

WASHINGTON

ACTION

MEMORANDUM FOR THE PRESIDENT

FROM: ROY L. ASH

SUBJECT: ACTION TO STRENGTHEN THE PRESIDENTIAL SCIENCE
ADVISORY APPARATUS

A number of science spokesmen objected strongly when the science advisory apparatus in the Executive Office of the President (EOP) was abolished in July 1973 and its functions transferred to the Director of the National Science Foundation (NSF) in the civilian area and to the National Security Council (NSC) in the military area. Concern in Congress over this action has been exhibited by the passage of S. 32 in the Senate on October 11, a bill to establish a Council of Science Advisers to the President--based on a recommendation of the National Academy of Science. In the House, the Science and Astronautics Committee is considering legislation for the next Congress to establish new advisory arrangements; but the Committee (and especially Chairman Teague) recognizes that any legislation should provide the President with reasonable flexibility. Because of science community concern and the possibility of legislative action that could preempt your options, there is a need to consider reaffirming or strengthening the present arrangement or else replacing it. In so doing you would be taking the initiative in this matter and hopefully heading off undesirable and restrictive legislation.

Alternatives

- I. Maintain the present arrangement redesignating Dr. Stever as "Science Adviser" by letter from you or more visibly strengthening it by formally appointing him as your Science Adviser and therefore a member of the White House staff.
- II. Appoint a full-time Science Adviser to the President with a small White House staff.
- III. Reinstitute a statutory science agency in the EOP headed by a Science Adviser or a three-man council.

*or without
any staff?*



Discussion

There is every reason to believe that the present arrangement can be made to work effectively in providing you and your senior staff with independent advice on scientific aspects of major civilian policy issues. The present arrangement also has the advantage of:

- making use of the considerable staff resources of NSF;
- not increasing the White House staff; and
- recognizing the increased capabilities of departments and agencies to provide direct advice on technical matters.

Real advantages

While there is some criticism from the science community and Congress that you lack advice on military R&D matters (because Dr. Stever is largely restricted to advice on civilian programs), we can point to the increased staff capability of the NSC to provide independent assessment of military R&D issues.

Another concern is whether Dr. Stever, as head of the National Science Foundation, can objectively provide advice on matters potentially affecting the Foundation (e.g., support of basic science). This is only a theoretical argument. Nothing Dr. Stever has done to date has led to public criticism or criticism from any agency in this regard.

Actions to establish either a full-time Science Adviser or to establish a statutory agency in the EOP are not warranted in our view because they:

- tend to emphasize science and technology as ends in themselves rather than means of achieving national objectives; and
- do not recognize the multifaceted nature of Presidential-level decisions and, thus, the necessity of integrating science advice with that from other fields.

Same arguments against Dr. Stever?



Recommendation

Because the present advisory arrangement can be effective, it should be continued, but with some strengthening of the tie to the President. Accordingly, I recommend Alternative I with formal designation of Dr. Stever as Science Adviser to the President and a member of your White House staff. (An appropriate charter for the Science Adviser is attached at Tab A.) If you agree, I recommend you present this approach in a meeting to selected members of the science community before you announce publicly Dr. Stever's appointment, and indicate to them that by this step you are committed to strengthening scientific input in the White House and EOP.

I should emphasize that this alternative may not be considered sufficient by the science community or by the Congress. However, it does have the advantage of still leaving your options open for any further strengthening actions you may consider necessary in the organization of your White House staff or EOP apparatus.

Agree _____

Disagree _____

See Me _____





CHARTER FOR THE PRESIDENT'S SCIENCE ADVISER

General Responsibilities in Civilian R&D Areas

*personally and
through outside
agents*

• Science Advice

- Providing personal advice to the President and his top advisers on matters related to science and technology.
- Analysis of scientific and technical components of major national policy issues and their implications on policy alternatives.
- Providing independent analysis of the quality and adequacy of major Federal R&D programs.

• Science Policy Formulation and Coordination

- Formulating policies affecting Federal support of science generally (particularly basic science).
- Providing leadership in developing, coordinating and evaluating Federal R&D programs of an interagency or international nature.

• Science Spokesman

- Articulating Federal policies to the scientific and technical community and acting, in general, as the communications link between the scientific community and the government.
- Representing the President and acting as chief spokesman for the President on science matters.
- Testifying before Congress on Federal activities in science and technology.

Exclusions

- Because the NSC staff has capability in areas related to military uses of science and technology, the Science Adviser would not have responsibilities in these areas except by invitation of the NSC or at the specific request of the President.

?





BACKGROUND ON OST

The Office of Science and Technology (OST), created in 1962 by President Kennedy, was headed by a Director who also had the title of Science Adviser to the President. This Office was preceded by the establishment in 1957, by President Eisenhower, of a Special Assistant for Science and Technology. The appointment of a Special Assistant was precipitated by concern over Sputnik and the perceived need for science advice at the highest levels in the government. At that time, most Federal agencies, including the Department of Defense, were weak scientifically, and the establishment of OST contributed to their significant upgrading.

Through the middle 1960's, OST focused much of its attention on military and space technological initiatives. In the late 1960's, however, as emerging national problems began to include components other than "hard" technology (e.g., economic and social issues), OST became less effective and less useful in contributing to Presidential-level decision-making. It evolved slowly into an organization whose role was less clear and not widely accepted in the Executive Office as essential.

Despite OST's efforts to change to meet the need for broader analysis and advice on civilian concerns of the 1970's, OST was criticized on:

- narrowly viewing science and technology as more important to solving civilian problems than was justified.
- promoting scientific and technical solutions to problems and, thus, advocating more R&D.
- not having broad enough capabilities to address economic, social and institutional factors in the social sciences.

In addition, OST, as the resident staff for the President's Science Advisory Committee, was criticized as not always



providing solid public support for the President on controversial issues involving scientific questions.

In a number of specific instances, OST did provide useful analysis to Executive Office staff. However, advice from OST was often ignored by the Executive Office as being irrelevant or overly biased toward support of R&D. OST tended to lack sufficient authority within the Executive Branch unless there was a special relationship between the President and the Science Adviser (e.g., President Kennedy and Dr. Weisner) or a special request for analysis from the President.

Initially, OST possessed more technical expertise than the agencies. However, as the agencies developed their own R&D capability and used outside scientific and technical review panels, OST was put in a position of second guessing the agencies often resulting in disputes and competition.



Siemens

November 25, 1974

To: Dr. Marre

From: Phil Buchen

Information



N.Y. Times

11/23/74

2D ATOM PARTICLE FOUND IN A WEEK

Subnuclear Phenomenon Is
Discovered on Coast

STANFORD, Califo. Calif.,
Nov. 22 (AP)—A second new
and mysterious nuclear particle
has been found deep within the
atom just days after the first

Some items in this folder were not digitized because it contains copyrighted materials. Please contact the Gerald R. Ford Presidential Library for access to these materials.

Friday 12/6/74

MEETING
12/10/74
8 a. m.

4:35 Dr. Wiesner's office has confirmed that he will
be here at 8 a. m. on Tuesday 12/10 to meet with you.

Eva:

Would you please get me a
copy before this meeting of
Dr. Wiesner's biographical sketch
in Who's Who or in any other
convenient source.



THE WHITE HOUSE

Science

ACTION MEMORANDUM

WASHINGTON

LOG NO.:

Date: February 5, 1975

Time:

FOR ACTION: Phil Buchen
 Jim Cavanaugh
 Jack Marsh
 Paul O'Neill
 Brent Scowcroft
 FROM THE STAFF SECRETARY

cc (for information):

DUE: Date: Friday, February 7, 1975

Time: 2:00 p. m.

SUBJECT:

Attached paper entitled "Science, Technology and the President's Executive Office"

ACTION REQUESTED:

- | | |
|---|--|
| <input type="checkbox"/> For Necessary Action | <input checked="" type="checkbox"/> For Your Recommendations |
| <input type="checkbox"/> Prepare Agenda and Brief | <input type="checkbox"/> Draft Reply |
| <input checked="" type="checkbox"/> For Your Comments | <input type="checkbox"/> Draft Remarks |

REMARKS:

This proposal is exceedingly unwise in the following respects
 (1) Statutory organization of such advisory bodies is too permanent and inflexible.
 (2) A science advisor (with a deputy) is far preferable to a large Science Office
 (3) A office that includes social and behavioral science is broad without limit.
 The President should not adopt this proposal.

*P. Auel
 P. Buchen*



PLEASE ATTACH THIS COPY TO MATERIAL SUBMITTED.

If you have any questions or if you anticipate a delay in submitting the required material, please telephone the Staff Secretary immediately.

Jerry H. Jones
 Staff Secretary

SCIENCE, TECHNOLOGY AND THE
PRESIDENT'S EXECUTIVE OFFICE

Recommendations

February 5, 1975

February 5, 1975

SCIENCE, TECHNOLOGY AND
THE PRESIDENT'S EXECUTIVE OFFICE

Recommendations

1. There should be a scientific and technological capability directly available to the President
 - (a) Many issues that come to the President, either for decision or for initiative, involve science and technology, sometimes to a very high degree, in the analytical and judgmental process.
 - (b) While the federal departments and agencies have, and should have, scientific and technological competence of high quality, the President should have available to him an independent source of scientific and technological judgment of the very highest quality. The organization set up to provide such a source for the President must not be, or be perceived as, the representative of the scientific and technical community in the President's office.
 - (c) While the present need for such a capability is clear, in our complex and technologically varied society, the need to draw upon science and technology to meet urgent problems and opportunities will be even greater in the decades ahead.



2. This capability should be lodged in an Office of Technology and Science

- (a) An Office of Technology and Science should be established by Congressional action and should be headed by a Director who should also have the title of Science and Technology Advisor to the President.
- (b) An Office, better than a single Advisor, or a Council or Committee of Advisors, can
- cover the full range of necessary competence without seeming to subordinate one area to another;
 - interact with (and "translate" the reports of) ad hoc expert task forces of consultants drawn from a variety of disciplines in and out of science and technology;
 - call on and utilize the best scientific, technological and professional talents in the country for specific tasks relevant to the President's responsibilities;
 - resist the pressures to make the President's Science Advisor the "spokesman for science and technology" as distinguished from the President's need for scientific competence in meeting his national responsibilities.

3. The areas of potential activity for the Office of Technology and Science should be principally:

[Note: Not all of the following activities need be undertaken at the outset. The functions of the Office should be allowed to grow as the President may require, as relationships with the departments and agencies of government develop, and as emerging national programs, policies and issues may make desirable and useful.]

- (a) To respond on scientific and technical matters to requests from the President with respect to issues that are before him for decision, or new initiatives.
- (b) To help the President resolve conflicting advice involving scientific matters that come to the President from departments, agencies or the Congress.
- (c) To organize ad hoc panels of consultants to assist in the collection and evaluation of relevant data with respect to particular technical and scientific issues.

The membership of such panels would be drawn from the special competence available in the private and public sectors including universities, the National Academies, industry, and government laboratories.

- (d) To provide the President with early warning of either
 - opportunities, or
 - problems



that have a scientific or technological component, including some longer range forecasting of such opportunities, problems or developments.

- (e) To identify and report on any gaps in scientific research and technological development in the public or private sectors that merit attention.
- (f) To consult with the President on the appointments of various scientific and technical officials in the federal agencies.
- (g) To stay in contact with the professional staffs of the federal departments and agencies, and of state and local governments, as well as with private sector organizations involved in science and technology.
- (h) To be available for participation in reviews of policies and programs of the departments and agencies having technical responsibilities and thus to assist in the formulation of national policy on technical and scientific matters.
- (i) To assist the Domestic Council, the National Security Council and the OMB in reviewing department and agency programs that have technical and scientific content.
- (j) To have a modest budget to initiate analyses and studies in support of the ad hoc panels mentioned in subparagraph (c) above. These analyses and studies would be performed in

universities, private industry or federally supported institutions.

4. Organization of the Office

- (a) The full-time Director of the Office should serve at the pleasure of the President.
- (b) The Director should have a full-time deputy responsible for the administration of the Office who need not be a scientist.
- (c) There should be provision for a flexible number of full-time Assistant Directors (up to five) so as to cover a decent range of professional disciplines without trying for "representation" of every professional discipline or interest, and to respond to the possible growth in Presidential needs for special competence.
- (d) Provision should be made for a flexible number of full-time professionally qualified staff (up to a dozen) as well as a clerical staff to meet the responsibilities of the Office as they may develop.
- (e) The ad hoc advisory panels (mentioned in paragraph 3 above) which are central to the effective functioning of the Office should:

- (i) be exempt from the Federal Advisory Committee Act.

Frank and objective advice cannot be expected to be available if exposed to continuous and public scrutiny and controversy.

- (ii) have their members, in general, appointed by the President.
- (iii) serve on a part-time basis for a limited term;
- (f) The Director would maintain close relationships with the National Academies of Science and of Engineering and the Institute of Medicine and, in establishing ad hoc panels, would make full use of their membership, as well as of academic faculties and such organizations as the Social Science Research Council.
- (g) The Office in its initial full year of operation should have an annual budget in the \$1 to \$3 million range.
- (h) Since science and technology are profoundly inter-related (not only among the scientific disciplines themselves, but with domestic and foreign social and political issues and the intellectual activity of the nation) the area of the Office's concern should be broad and include:

- social and behavioral sciences
- physical and life sciences
- medicine
- engineering
- military applications
- international aspects of science and technology
- science and technology in the private sector
- education and training of scientific manpower

5. The Qualifications of the Director

The Director must have, or be the type of person who can readily gain, the personal confidence of the President.

He or she should be a scientist, engineer or medical person of proven scientific or technical capability, have some experience in public service or administration, and should preferably be a member of one of the National Academies of Science or Technology or the Institute of Medicine.