The original documents are located in Box 32, folder "Science and Technology Policy, Office of (9)" of the James M. Cannon Files at the Gerald R. Ford Presidential Library.

MEMORANDUM

OFFICE OF THE VICE PRESIDENT

WASHINGTON

February 9, 1976

MEMORANDUM FOR: THE VICE PRESIDENT

FROM: DICK ALLISON

SUBJECT: The Science Office Bill and Simon Ramo

1. At TAB B is a brief summary of Simon Ramo's contribution to planning what the new Science Office should be doing. You asked that this be prepared for use in informally approaching the Hill regarding the possibility of the Senate's agreeing to confirm Simon Ramo as Director of the new office. On February 5, the President authorized you to make this approach.

2. The following should also be considered:

a. Ramo's conditions. According to Peter, Ramo will take the job only if:

(1) an appropriate trust agreement can be concluded that won't reduce his income;

(2) he can convince his board to give him a leave of absence;

(3) some kind of statement as to his unimpeachable integrity would be made in the Senate which would give him and his board confidence that his company would not be discriminated against in the awarding of government contracts simply because he had taken a position in the Administration.

b. For confirmation, the key committees and Senators are:

Aeronautical and Space Sciences	Moss/Goldwater
Commerce	
Special Subcommittee on Science, Technology, and Commerce	Tunney/Beall
Labor and Public Welfare	
Special Subcommittee on the National Science Foundation	Kennedy/Laxalt

c. Timing:

(1) The Administration and the House object to certain provisions of the Senate bill which was passed last Wednesday, February 4 (TAB A);

(2) The present plan on the Hill is to strike a bargain at the staff level this week or next, which will result in a compromise acceptable to all and thus in a bill the President can sign by the end of the month;

(3) If inquiry as to whether Ramo could be confirmed under the conditions which he has set is made before the conference compromise has been agreed to, then Senator Kennedy (and particularly his staff) might use the promise of a favorable attitude towards Ramo to force the Administration and the House to back down and withdraw their objections to key aspects of the Senate Bill.

(4) The Administration might thus find itself having to balance the need for Ramo against its current alignment with the House on the structure and function of the office. This could jeopardize the compromise, and possibly the early establishment of the office.

(5) On the other hand, delaying an approach to the Hill about Ramo until after the bill has been cleared for the White House could mean that the President might have to sign the bill before he had selected a Director - although there would still be 10 days for action between the time of the bill's clearance and the deadline for Presidential approval.

3. I have discussed this with Jim Cannon and Jack Veneman, and they and I feel that the passage of an acceptable bill is the overriding objective.

4. Therefore, we recommend that:

(1) in any event, you telephone Dr. Ramo to determine his final conditions for taking the job;

(2) then, should those conditions be acceptable, that you postpone discussing them with the Senate until the conference compromise has been concluded and the bill cleared for the White House.

Four Administration Objections to the Senate Bill (S-32)

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

A. Principal Requirements are that:

1. The new office prepare forecasts of:

-- Federal funding for science, engineering and technology activities;

-- priorities for funding among areas of science and technology;

-- options for funding levels and priorities.

2. Options for funding levels and allocation among areas be:

-- furnished to OMB; and be included in an annual report from the President to the Congress.

B. Principal Objections are:

1. 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 projects of the overall programs (Federal and non-Federal) for meeting particular objectives -- for example, transportation, health, defense objectives;

-- where it is appropriate, a part of the funds devoted to agency programs are spent for science & technology, but science and technology funding levels must be considered in relation to funding for other activities for meeting the particular agency or national objectives, not treated in isolation.

2. The Federal Government does not now have 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.

3. Five year forecasts of investments for science and technology 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.

4. Recommendations made by a Presidential adviser should go to the President for consideration -- not to both the President and the Congress -- which is the practical effect of combination of sections 204 and 208.

C. Remedy:

-- Section 204 (and clause in 208) will be eliminated in Conference.

D. Potential Difficulty:

-- You are on record (at the White House Conference with Senator Kennedy on the Hill last June) as favoring something like this 5-year forecast, which the Administration opposes (see attachment to this tab).

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

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

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

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

2. Presents a virtually impossible task because science and technology are means to achieve 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.

C. Conference may end up with a requirement for a periodic rather than annual report.

D. Potential Difficulty

-- You are also on record as supporting this.

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

A. Principal Requirements:

1. Creates an interagency coordinating group made up of representatives of departments and agencies with significant science and technology activities.

2. 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).

B. Principal Objections:

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

2. 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.

C. Remedy:

-- Conference will probably end up with a provision very much like this.

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

A. Principal Provisions:

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

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

B. Principal Objections:

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

2. 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.

a. 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.

b. 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.

3. Moreover, this is not directly related to principal purposes of bill.

C. Remedy:

-- Title V will be eliminated in Conference.

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 these 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 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

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-

SIMON RAMO

Simon Ramo is a well-known scientist and industrialist (biography at TAB I). He has played a key role in bringing together distinguished leaders from the Nation's scientific and technological community to assist in planning the soon-to-be-established Office of Science and Technology Policy in the White House.

In July 1975, shortly after the Administration's legislation proposing the new office went to the Congress, Simon Ramo, at the Vice President's request, organized the first of a series of meetings designed to solicit advice, comment, and guidance from these leaders (list of attendees at TAB II).

In September, Dr. Ramo organized a second group (TAB III), which, at the end of the meeting, recommended that the Administration move quickly to establish one or two advisory and consulting groups which would identify high priority issues for the Administration and thus enable it to deal with them quickly.

The President approved this recommendation on September 16, and the establishment of the groups, under the sponsorship of the National Science Foundation, was announced on November 12 (TAB IV). Simon Ramo was named Chairman of the advisory group on the "Contribution of Technology to Economic Strength," and Dr. William O. Baker agreed to head the other group on "Anticipated Advances in Science and Technology."

The groups met for the first time on December 1 and 2 (agenda at TAB V), and again on January 14 and 15 (agenda at TAB VI).

As a result of these meetings, working groups have been established in the following areas for the purpose of identifying items deserving high priority for the attention of the Administration and of the office, once it is established:

(1) Food and nutrition;

(2) Innovation and productivity;

(3) Health and safety regulation;

(4) Biomedical research;

(5) Science and economic policy;

(6) The "science court" experiment;

(7) Military research and development;

(8) International aspects and ramifications of our science and technology policies;

(9) How the Executive Branch can better use the National Academies of Science and of Engineering;

(10) Basic research activities, including education;

(11) The behavioral and social sciences.

Simon Ramo has been the indispensable catalyst in organizing these groups and opening a direct channel from the Nation's science and technology community to the White House. This channel is already in use. In the leadership role which Dr. Ramo has played in bringing this all about, he has demonstrated the kind of experience, knowledge, range of acquaintanceship, and clarity of judgment that would make him an ideal choice as the first Director of the new Office.

RAMO, SIMON, engring. exec; b. Salt Lake City, May 7, 1913; S - Benjamin and Clara (Trestman) R: B,S,, U. Utah, 1933. D.Sc., 1961; Ph.D., Cal. Inst. Tech., 1936; Dr. Engring, Case Inst. Tech., 1960. U. Mich., 1966, Poly. Inst. Bklyn., 1971; D.Sc. Union Coll., 1963, Worcester Poly. Inst., 1968. U. Akron, 1969; LL.D., Carnegie-Mellon U., 1970, U. So. Cal., 1972; m. Virginia Smith, July 25, 1937; children - James, Alan. Various positions including head physics sect. electronics research lab Gen. Elec. Co., Schenectady, N.Y., 1936-46; with The Hughes Aircraft Co., Culver City, Cal., 1946-53, dir. research electronics dept., dir, guided missile research and devel., v.p. dir. operations; exec, v.p., founder, dir. The Ramo-Woolridge Corp., Los Angeles, 1953-58; pres. Space Tech. Labs., 1957-58; sci. dir. USAF ballistic missile program. Atlas, Titan and Thor, 1954-58; exec. v.p. dir. Thompson Ramo Woolridge. Inc. (TRW, Inc.), 1958-61, vice chmn. bd., 1961 -, chmn. exec. com., 1969 -, also dir., pres., dir. The Bunker-Ramo., 1964-66; research asso. elec. engring. Cal. Inst. Tech., 1946 -; dir. Union Bank, Unionam. Inc., 1965 -, Times Mirror Co., 1968 -. W. Rupert Turnbull meml. lectr. IAS Internal meeting, 1956; Steinmetz meml. lect., 1959; Regents lectr. U. Cal. at Los Angeles, 1961; William Henry Snyder meml. lectr., 1964; Charles M. Schwab meml. lectr. Am. Inst. Iron and Steel Inst., 1968; cons. Presdl. Sci. Adv. Com., 1959 -. Am. Psychiat. Assn. Commn. on Delivery of Mental Health Services. Mern. Sr. Execs. Adv. Council, 1970 -; mem. U.S. Dept Commerce Internat. Bus. Adv. Com., 1970 -; mem. Adv. Com. on Japan-U.S. Econ. Relations; 1970 -. Adv. mem. bd. dirs. Mgmt. Devel. Center U. Houston Coll. Bus. Adminstrn; bd. dirs. Chamber Symphony Soc. Cal., Inc., So. Cal. Symphony-Hollywood Bowl Assn, Music Center Assn.; trustee Aerospace Edn. Found, Inc., Am. Mus. Electricity, Cal. Inst. Tech., City Hope; mem. adv. council Sch. Engring-Stanford U.; mem. bus. adv. com. Carnegie-Mellon U.; mem. vis. com. Sch. Engring. and Applied Physics Harvard U. Recipient Paul T. John award Arnold Air Soc., 1960; Man of Hope award City of Hope, 1962; Am. Acad. Achievement award, 1964; Distinguished Service gold medal Armed Forces Communication and Electronics Ass., 1970; medal of achievement WEMA, 1970; outstanding achievement in bus. mgmt. citation U. So. Cal. Sch. Bus. Adminstrn., 1971; citation of honor Air Force Assn. Fellow I.E.E.E. (Electronic Achievement award 1953), Am. Phys. Soc., Am. Inst. Aeronatics and Astronautics, Am. Acad. Arts and Scis., Am. Astronautical Soc., Inst. Advancement Engring., A.A.A.S.; mem. Nat. Acad. Engring (founder, council mem.),

Internat. Acad. Astronautics. The Conf. Bd., U.S.C. of C. (mem. council on trends and perspective, U.S.-Japan Trade Adv. Council, dir.) Am. Philos. Soc., Sigma Xi, Tau Beta Pi, Phi Kappa Phi, Eta Kappa Nu (eminent mem., outstanding young elec. engr. award 1941), Sigma Pi Sigma. Author: (with John R. Whinnery) Fields and Waves in Modern Radio * 1944, 53: Introduction to Microwaves, 1945; (with John R. Whinnery) and Theodore Van Duzer) Fields and Waves in Communication Electronics, 1965; Cure for Chaos, 1969; Century of Mismatch, 1970; Extraordinary Tennis for the Ordinary Player, 1970. Editor and contbr. textbooks articles to tech. publs. Patentee microwaves, electron optics, guided missiles, automatic controls. Home: Beverly Hills CA, Office: One Space Park Redondo Beach CA 90278.

List of Participants

July 17, 1975, Meeting

The Vice President

Dr. William O. Baker
President, Bell Laboratories

Dr. Lewis M. Branscomb
Vice President and Chief Scientist, IBM

Dr. Harold Brown
President, California Institute of Technology

Dr. Lee A. DuBridge
Former President, California Institute of Technology
Former Presidential Science Adviser, 1969 - 1970

Dr. John S. Foster, Jr.
Vice President for Energy Research and Development, TRW, Inc.
Former Director of Research, Department of Defense

Dr. Philip Handler
President, National Academy of Sciences

Dr. J. George Harrar
Former President, The Rockefeller Foundation

Dr. Wilmot N. Hess
Director, Environmental Research Labs, National Oceanic and Atmospheric Administration

Dr. Hans M. Mark
Director, Ames Research Center, NASA

* Dr. Franklin M. Murphy
Chairman of the Board, Times-Mirror Company, Los Angeles

Dr. Courtland Perkins
President, National Academy of Engineering

Dr. Simon Ramo
Vice Chairman of the Board and Chairman of the Executive Committee, TRW, Inc.

*Illness prevented his attendance.

Dr. Norman C. Rasmussen
Professor of Nuclear Engineering, MIT

Dr. Dixie Lee Ray
Former Chairman, Atomic Energy Commission

Dr. H. Guyford Stever
Director, National Science Foundation

Dr. Edward Teller
Director-at-Large
Lawrence Livermore Laboratories, University of California

Jim Cannon

Glenn Schleede (Domestic Council)

David Elliott (National Security Council)

Dick Allison (Vice President's Staff)

List of Participants

September 4, 1975, Meeting

The Vice President

Dr. Harvey Brooks
Dean, Division of Engineering and Applied Physics
Harvard University

Dr. Joseph V. Charyk
President, Communications Satellite Corp.

Dr. Edward E. David, Jr.
Executive Vice President, Gould Inc.
Former Presidential Science Adviser, 1970-1972

Professor Freeman J. Dyson
Institute for Advanced Study

Dr. J. S. Foster, Jr.
Vice President for Energy Research and Development
TRW, Inc.

Dr. Robert Gilpin
Professor of Public and International Affairs
Princeton University

Dr. Patrick E. Haggerty
Chairman of the Board, Texas Instruments, Inc.

Dr. James R. Killian, Jr.
Honorary Chairman of the Corporation
Massachusetts Institute of Technology
Former Presidential Science Adviser, 1957-1959

Dr. Hans Mark
Director, Ames Research Center, NASA

Dr. William A. Nierenberg
Director, Scripps Institution of Oceanography
University of California, San Diego

Mr. Peter Peterson
Chairman of the Board, Lehman Brothers

Dr. Simon Ramo
Vice Chairman of the Board and Chairman of the
Executive Committee, TRW, Inc.

Dr. Frederick Seitz
President, Rockefeller University

Dr. H. Guyford Stever
Director, National Science Foundation

Dr. Edward Teller
Director-at-large, Lawrence Livermore Laboratory
University of California

Dr. Robert M. White
Administrator, National Oceanic and Atmospheric
Administration

Jim Cannon

Glenn Schleede (Domestic Council)

David Elliott (National Security Council)

Jon Howe (Vice President's Staff)

Dick Allison (Vice President's Staff)

FOR IMMEDIATE RELEASE

NOVEMBER 12, 1975

Office of the White House Press Secretary

THE WHITE HOUSE

FACT SHEET

ADVISORY GROUPS ON SCIENCE AND TECHNOLOGY

The President is today announcing the establishment of two new advisory groups concerned with science and technology. One group will be concerned with contributions of technology to economic strength; the other with anticipated advances in science and technology.

Background

- On June 9, 1975, the President sent legislation to the Congress proposing the establishment of an Office of Science and Technology Policy (OSTP) in the Executive Office of the President.

- On November 6, the House of Representatives passed legislation (H.R. 10230) to create the OSTP. Three Senate Committees are now working on similar legislation and are expected to complete action soon.

To facilitate planning for the activities of the OSTP, the President directed the Vice President, working with Science Adviser, H. Guyford Stever, to bring together two groups to experts on two major areas that will be important to the new Office in providing advice on scientific and technical aspects of issues and policies that must be addressed at the highest level of the Government.

Functions and Membership of
The Two Advisory Groups

Both groups will be made up of experts from the academic community, industry, government and other organizations who can provide advice on the wise use of science and technology in achieving important national objectives.

1. Contribution of Technology to Economic Strength. This group will examine issues and opportunities involving the improved utilization of technology in fostering economic strength and in assuring that economic goals are achieved along with environmental goals. Examples of issues that are expected to be discussed are:

   - productivity improvements through new, developing technological systems.
   - environmental and safety aspects of technological developments.
   - the role of government in fostering U.S. technological development.
   - the international economic impact of technological transfer among nations.

   This advisory group will be chaired by Dr. Simon Ramo, Vice Chairman of the Board, TRW, Inc., Redondo Beach, California.

   Other members include:

   Dr. Ivan Bennett, Provost of Medical Center, Dean, School of Medicine, New York University, New York, N.Y.

   Dr. C. Fred Bergsten, Senior Fellow, The Brookings Institution, Washington, D.C.

   Dr. Lewis Branscomb, Vice President and Chief Scientist, International Business Machines Corp., Armonk, N.Y.

   Dr. Arthur Bueche, Vice President, Research & Development, General Electric Company, Schenectady, N.Y.

   Dr. Joseph Charyk, President, Communications Satellite Corp., Washington, D.C.

   Dr. Edward E. David, Jr., Executive Vice President, Gould Inc., Chicago, Illinois

Dr. Carl Djerassi, Professor of Chemistry, Stanford University, Stanford, California

Dr. Robert Gilpin, Professor of Politics & International Affairs, Woodrow Wilson School, Princeton Univ., Princeton, N.J.

Mr. Patrick Haggerty, Chairman of the Board, Texas Instruments, Inc., Dallas, Texas

Mr. Charles Hitch, President, Resources for the Future, Washington, D.C.

Dr. J. Herbert Holloman, Director, Center for Policy Alternatives, Massachusetts Institute of Technology, Cambridge, Massachusetts

Dr. Edwin Land, Chairman of the Board, Polaroid Corporation, Cambridge, Massachusetts

Dr. Hans Mark, Director, Ames Research Center, NASA, Moffett Field, California

Dr. Norman Rasmussen, Professor, Department of Nuclear Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts

Dr. Marina v. N. Whitman, Distinguished Public Service, Professor of Economics, University of Pittsburgh, Pittsburgh, Pennsylvania

Dr. William Nierenberg, Director, Scripps Institution of Oceanography

2. Anticipated Advances in Science and Technology. This group will consider developments that may take place in science and engineering in the decade ahead and examine the national policy implications of these developments. Examples include:

- new communication technology
- disaster prediction and control technology
- waste supply technology
- technological aids for improved or more economical health care

This advisory group will be chaired by Dr. William O. Baker, President, Bell Laboratories, Murray Hill, N.J.

Other members include:

Dr. John Baldeschwieler, Chairman, Division of Chemistry & Chemical Engineering, California Institute of Technology, Pasadena, California

Dr. Manson Benedict, Professor of Nuclear Engineering, Massachusetts Institute of Technology, Cambridge, Mass.

Dr. Solomon J. Buchsbaum, Executive Director, Research Communications Division, Bell Laboratories, Murray Hill, N.J.

Dr. Melvin Calvin, Professor, Laboratory of Chemical Biodynamics, University of California, Berkeley, California

Dr. Harry Eagle, Associate Dean for Scientific Affairs & Director for Cancer Research Center, Albert Einstein College of Medicine, Bronx, N.Y.

Dr. Eugene Fubini, 1901 North Ft. Myer Drive, Arlington, Va.

Dr. Murray Gell-Man, Professor of Physics, California Institute of Technology, Pasadena, California

Dr. Arthur Kantrowitz, Director, Avco-Everett Research Laboratory, Everett, Massachusetts

Dr. Donald Kennedy, Professor, Department of Biological Sciences, Stanford University, Stanford, California

Dr. Hans Mark, Director, Ames Research Center, NASA, Moffett Field, California

Dr. Frank Press, Institute Professor Emeritus, Massachusetts Institute of Technology, Cambridge, Massachusetts

Dr. Frederick Seitz, President, Rockefeller University, New York, N.Y.

Dr. Charles Slichter, Professor of Physics, University of Illinois, Urbana, Illinois

Dr. Edward Teller, Director-at-Large, Lawrence Livermore Lab, University of California, Livermore, California

Dr. Charles Townes, Professor of Physics, University of California, Berkeley, California

# # # #

Joint Meeting of the
Advisory Group on Contributions of Technology to Economic Strength and
Advisory Group on Anticipated Advances in Science and Technology

December 1 and 2, 1975
Conference Room 2003
New Executive Office Building
Washington, DC

AGENDA

December 1, 1975 - 9:30 - 4:00

I. Welcome and Introductory Remarks

9:30 --Chairmen

II. Review of principal environments in which science and technology policy will operate

10:15 --Economic Outlook --James T. Lynn, Director, OMB
Paul H. O'Neill, Deputy Director, OMB

11:00 --Foreign policy and US technology -- Charles W. Robinson
Under Secretary of State for Economic Affairs

12:00 --Working Lunch, Room 2010

1:00 --Commercial environment, patents, industry situation --
Betsy Ancker-Johnson, Assistant Secretary for Science
and Technology, Department of Commerce

1:45 --Food and Agriculture -- Robert W. Long, Assistant Secretary for Conservation, Research and Education, Department of Agriculture

2:30 --Group Discussion

3:30 --Energy -- John A. Hill, Deputy Administrator, Federal Energy Administration

4:15 --Adjourn

December 2, 1975 - 9:30 - 4:00

III. Review of ongoing activity related to the advisory groups' charters

9:30 --Philip Handler, National Academy of Sciences

10:15 --Courtland D. Perkins, National Academy of Engineering

11:00 --Emilio Q. Daddario, Office of Technology Assessment

12:00 --Lunch (Informal remarks, H. Guyford Stever, National Science Foundation)

IV. Discussion of work plan and future advisory group activities

1:00 --Group discussion

4:00 --Adjourn

Meeting of the
Advisory Group on Anticipated Advances in Science & Technology

January 14, 1976
Conference Room 2008
New Executive Office Building
Washington, DC

AGENDA

9:00 - 12:00 - Meeting Closed

9:00 - Energy R&D Issues, Dr. Robert C. Seamans, Administrator, Energy Research and Development Administration

10:00 - Food and Nutrition

Introduction to National Academy of Sciences study, review of interim report (distributed at meeting). Dr. Harrison Brown, California Institute of Technology.

10:20 - Enhancement of Food Production for the U.S. - Dr. Sylvan Wittwer, Michigan State University

10:40 - Discussion

11:00 - National Climate Program and Review of Ocean Science & Technology issues - Dr. Robert White, Administrator, National Oceanic & Atmospheric Administration

12:15 (about) - Lunch

1:00 - 4:00 - Meeting Open

1:00 - Earthquake Prediction & Natural Hazards

Introductory Remarks - Dr. Frank Press

1:15 - U.S. Geological Survey, Dr. Vincent McKelvey - Director

2:30 - Committee Discussion

4:00 - Adjournment

Meeting of the
Advisory Group on Contributions of Technology to Economic Strength

January 15, 1976
Conference Room 2008
New Executive Office Building
Washington, DC

AGENDA

9:00 - 12:00 - Meeting Closed

9:00 - US-USSR Bi-lateral Science and Technology Cooperation -
H. Guyford Stever, Director, National Science Foundation.
Dr. Arnold Frutkin, NASA; Apollo-Soyuz
Dr. William Hill, ERDA; MHD Program

9:30 - Chemicals and Health

Introductory Remarks - Dr. Edward Burger, National Science Foundation
Dr. Paul MacAvoy - Member, Council for Economic Advisors
Dr. Charles C. Edwards, Senior Vice President for Research and Scientific Affairs, Becton-Dickinson & Company

10:30 - Regulation in the nuclear industry - Mr. William Anders, Chairman, Nuclear Regulatory Commission

12:00 - Lunch

1:00 - 4:00 - Meeting Open

1:00 - Technology and Innovation
Dr. J. Herbert Hollomon - Comparative Government Policies
Dr. Dickson Long, Professor, CaseWestern University - Japan
Dr. Marin Sirbu, Institute for Policy Alternatives - France
Mr. Bill Stewart, National Science Foundation - Comparative R&D Investments

3:00 - Committee Discussion

4:00 - Adjournment

THE WHITE HOUSE

WASHINGTON

February 28, 1976

MEMORANDUM FOR: BILL KENDALL

FROM: GLENN SCHLEEDE

SUBJECT: Legislation to Create the Office of Science and Technology Policy (OSTP)

We need some help in making sure that Senator Beall knows our position on this matter and will support us in the conference that's coming up. Our position is described in my 2/28/76 memo to Paul O'Neill, a copy of which was sent to you on Friday.

Beall's staff man on the Commerce Committee (Phillip Grill) is thoroughly familiar with our position and believes that Senator Beall will be fully supported but he indicated during our conversation on Friday that he had not had a chance to reaffirm the Senator's support.

Could you or Joe Jenckes see or call the Senator and make sure everything is okay. As I indicated in the memo to Paul, we should do well in the conference as long as Senator Beall stands fast.

Please let me know if there is any more information you need or whether you want me to participate in the discussion.

Thanks.

cc: Jim Cannon
Paul O'Neill
Charlie Leppert

Mr. Cannon

THE WHITE HOUSE

WASHINGTON

February 28, 1976

MEMORANDUM FOR: PAUL O'NEILL

FROM: GLENN SCHLEEDE

SUBJECT: LEGISLATION TO CREATE THE OFFICE OF SCIENCE AND TECHNOLOGY POLICY

As I indicated, Mike Pertschuk is expected to call Jim Lynn to try to reverse our position on the Senate-passed OSTP legislation. Pertinent facts as follows:

1. Conferees appointed yesterday - Senate staffers met today.

2. Three Senate Committees involved: Commerce, Labor & Welfare and Space. We are in good shape with:

   . Minority conferee of all 3 committees; Goldwater, Laxalt, and Bell.
   . Majority conferees from Space Committee: Moss, Ford.

   We are opposed by Kennedy and 1 other democrat from Labor and Welfare; and Tunney and other democrat from Commerce.

   When Kennedy and Tunney staffers found out we were holding fast with good support, they broke up and Pertschuk decided to appeal our position to Jim Lynn.

3. We are in good shape in the House. The President has indicated that House bill is acceptable in letter to Teague.

4. We have objected to four provisions of the Senate-passed (Kennedy) bill. Contents of provisions and rationale for opposition at TAB A. Provisions are:

   - Section 204 - OSTP involvement in 5 year and 1 year R&D Budgets.
   - Section 208 - We want periodic rather than annual S&T report.
   - Title IV - We'd prefer the FCST not be statutory.
   - Title V - We oppose a new categorical grant program to create science advisers(2) in each state, and the proposed 59-member intergovernmental S&T committee.

5. Understanding with friends in the Senate is set forth at TAB B. Briefly it says that:

. Section 204 and Title V must go.
. We could live with Section 208 and Title IV.

All I ask is that you stand fast!

cc: Jim Cannon

TAB A

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 OSETP 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 pracicable 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

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).

. 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.

TAB B

UNDERSTANDING AS TO THE FUTURE OF THE OBJECTIONABLE PROVISIONS OF S. 32

1. Section 204--Federal science and technology funding forecasts, options and priorities (and reference to 204 in Sec. 208).

   . Administration strong objections will be made known.

   . If not eliminated in Committees or on the floor, one or more minority members will make known on the floor the strong reservations about the provisions and will explain that (a) their vote for S.32 is to get a bill passed that can be brought quickly to Conference with H.R. 10230, and (b) they do not intend to press for retention of section 204 (and clause in 208) in Conference.

   . Section 204 (and clause in 208) will be eliminated.

2. Section 208(Annual Report)

   . Administration preferences for periodic rather than annual report and concerns about broad report requirements will be made known.

   . Dialogue in committees or on the floor and/or material included in Committees' report will be adequate to assure that the report requirement is construed narrowly.

   . Conference is ~~likely to~~ may end up with a requirement for a periodic rather than annual report.

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

   . Administration objections to a statutory interagency group -- rather than relying on a group created by an Executive Order -- will be made known.

   . If this title is retained by the Senate(as expected), there will be an opportunity in conference for the Administration to present a case for any critical changes to the language to correct serious problems -- recognizing that most of Title IV was taken verbatum from the E.O. creating the FCST and revisions of that E.O. are believed desireable.

   . Conference may end up with a provision much like Title IV.

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

   . Administration strong objections will be made known.

- If not eliminated in Committee or on the floor, one or more minority members would make known on the floor the strong reservations about the provisions and would explain that (a) their vote for S. 32 is to get a bill passed that can be brought to conference quickly with H.R. 10230, and (b) they do not intend to press for retention of Title V in Conference.

- Title V will be eliminated in Conference.

THE WHITE HOUSE

WASHINGTON

SIGNATURE

March 10, 1976

MEMORANDUM FOR: THE PRESIDENT

FROM: JIM CANNON

SUBJECT: MESSAGE TO THE CONGRESS ON SCIENCE AND TECHNOLOGY

Attached for your consideration is a proposed message to the Congress on Science and Technology. It urges prompt and favorable Congressional action on the request for legislation to create an Office of Science and Technology Policy and for $24.7 billion in 1977 funding for research and development programs.

The message has been reviewed by Messrs. Buchen, Friedersdorf, Goldwin, Greenspan, Hartmann, Lynn, Marsh, Scowcroft, and Seidman.

The message has been approved by Doug Smith for Mr. Hartmann.

RECOMMENDATION

That you sign the proposed message.

Attachment

THE WHITE HOUSE

WASHINGTON

March 22, 1976

SIGNING CEREMONY FOR SCIENCE AND TECHNOLOGY MESSAGE
Monday, March 22, 1976
12:30 A.M. (10 minutes)
The Cabinet Room

From: Jim Cannon signed

I. PURPOSE

To draw attention to the Science and Technology Message and to your views as to the importance of research and development.

II. BACKGROUND

A. Background. This is your first message on science and technology. The message urges Congress to act quickly on legislation to create the Office of Science and Technology Policy (OSTP) and to approve the $24.7 billion in funding you have requested for research and development.

B. Participants

- Several prominent leaders from the scientific and engineering communities (Tab A)
- Guy Stever, current science adviser, and thirteen other top Federal agency R&D officials -- (Tab B)
- Staff: Jim Cannon/Glenn Schleede

III. TALKING POINTS

See Tab C.

SCIENTIFIC AND ENGINEERING COMMUNITY OFFICIALS

- Philip Handler, President, National Academy of Sciences

- David Hamburg, President, Institute of Medicine

- Roger Heyns, President, American Council on Education

- Ernest Gilmont, President, Committee of Scientific Society Presidents

- Kerstin (pronounced Chestin) B. Pollack, Assistant Secretary, National Academy of Engineering (attending for NAE President Cortland Perkins)

FEDERAL GOVERNMENT OFFICIALS

H. Guyford Stever, Science Adviser and Director of NSF
S. Dillon Ripley, Secretary, the Smithsonian Institute
James C. Fletcher, Administrator, NASA
Malcolm R. Currie, Director, Defense Research and Engineering
Robert Fri, Deputy Administrator, ERDA
Theodore Cooper, Assistant Secretary of HEW
John J. Martin, Assistant Secretary of the Air Force
H. Tyler Marcy, Assistant Secretary of the Navy
Edward A. Miller, Assistant Secretary of the Army
Hamilton Herman, Assistant Secretary of Transportation
Betsy Ancker-Johnson, Assistant Secretary of Commerce
Donald Fredrickson, Director of NIH
T. W. Edminster, Administrator, Agriculture Research Service
Vincent McKelvy, Director, Geological Survey
Wilson Talley, Assistant Administrator of EPA
Myron Kratzer, Acting Assistant Secretary of State

(Selover)

March 11, 1976
THIRD DRAFT

PRESIDENTIAL REMARKS ON SENDING THE MESSAGE ON SCIENCE AND TECHNOLOGY TO THE CONGRESS, TUESDAY, MARCH 16, 1976

Since its beginning, America has derived great benefit from the inventiveness and creativity of its people.

From Benjamin Franklin's first experiments with electricity to the most recent discoveries in space-age medicine, research and development have been crucial elements in our Nation's remarkable growth.

They have never been more important than they are now.

Science and technology are daily becoming more and more vital for the peace and security of our country -- and for the world.

It is no exaggeration to say that the future well-being of our Nation depends on putting our best minds to work now to solve the problems of tomorrow.

In recent years, we have made major investments in research and development. And this investment has paid dividends in economic growth, in the quality of our lives, and in the strength of our defenses. But we must do more.

The budget which I submitted to the Congress in January is one measure of the importance I attach to a continued national investment in science and technology. In it, I requested 24.7 billion dollars for research and development activities, an increase of 11 percent over 1976 estimates.

It focuses special attention on research and development for energy and defense and on basic research. It continues or increases support in agriculture, space, health and other areas that show promise in meeting the challenges we face.

At the same time, we must make sure we have ~~the best~~ expertise scientific and technical ~~know-how~~ at the highest levels of government.

To do this, I have submitted legislation to establish an Office of Science and Technology Policy in the Executive Office of the President.

I urge the Congress to ~~complete action on~~ ~~It is vital that the Congress~~ act promptly ~~and positively~~ ~~this proposal~~ on this proposal and on my 1977 budget requests. Let us make certain that science, engineering and technology will continue to play a major part in assuring our future strength and prosperity.

# # #

STET

White Page

Complete action

TO THE CONGRESS OF THE UNITED STATES:

The desire and the ability of the American people to seek and apply new knowledge have been crucial elements of the greatness of our country throughout its 200-year history.

Our Founding Fathers placed high value on the pursuit of knowledge and its application. They supported exploration, new methods of agriculture, the establishment of scientific societies and institutions of higher learning, measures to encourage invention, and means to protect and improve the Nation's health.

In our recent history, the Nation has made major investments in research and development activities to ensure their continued contribution to the growth of our economy, to the quality of our lives and to the strength of our defenses. Today there is mounting evidence that science and technology are more important than ever before in meeting the many challenges facing us.

I fully recognize that this country's future -- and that of all civilization as well -- depends on nurturing and drawing on the creativity of men and women in our scientific and engineering community.

The 1977 Budget which I submitted to the Congress on January 21, 1976, is one measure of the importance I attach to a strong National effort in science and technology. My total budget restrains Federal spending to $395 billion -- an increase of 5.5 percent over 1976. But my Budget requests $24.7 billion for the research and development activities of the various Federal agencies, an increase of 11 percent over my 1976 estimates. Included within this total of $24.7 billion is $2.6 billion for the support of basic research, also an increase of 11 percent. Such long-term exploratory research provides the new knowledge on which advances in science and technology depend. I urge the Congress to approve my budget requests.

I also urge the Congress to pass legislation to establish an Office of Science and Technology Policy in the Executive Office of the President. This will permit us to have closer at hand advice on the scientific, engineering and technical aspects of issues and problems that require attention at the highest levels of Government.

On June 9, 1975, I submitted a bill to the Congress that would authorize creation of such an office. The director of this new office would also serve as my adviser on science and technology, separating this responsibility from the many demands of managing an operating agency. On November 6, 1975, the House of Representatives passed an acceptable bill, H.R. 10230, which authorizes the new office. On February 4, 1976, the Senate passed a similar bill which, with some changes, would also be acceptable. Those bills are now awaiting action by a House-Senate Conference Committee. Early agreement by the conferees on a workable bill will permit me to proceed without further delay in establishing the Office of Science and Technology Policy.

In addition to its direct support of research and development, the Federal Government has a responsibility to ensure that its policies and programs stimulate private investments in science and technology and encourage innovation in all sectors of the economy -- in industry, the universities, private foundations, small business, and State and local Governments. We pursue this objective through our tax laws, cooperative R&D projects with industry, and other incentives.

Industry and other elements of the private sector now support nearly 50 percent of the Nation's total research and development effort and we must avoid displacing these important investments.

The role of industry is particularly important. In our competitive economic system, industry turns new ideas from laboratories into new and improved products and services and brings them to the marketplace for the Nation's consumers. Industry has built successfully on advanced developments of the past and provided new products and services of great economic and social value to the Nation. This can be seen in electronics, computers, aircraft, communications, medical services and many other areas.

My 1977 Budget gives special attention to research and development for energy and defense and to basic research. It also continues or increases support for other important areas such as agriculture, space, and health where research and development can make a significant contribution.

-- In energy, an accelerated research and development program is vital to our future energy independence. My 1977 Budget proposes $2.6 billion for energy research and development -- a 35 percent increase over 1976. These funds, together with the efforts of private industry, provide for a balanced program across the entire range of major energy technologies. Major increases are proposed in energy conservation to achieve greater energy efficiency. Additional funding is provided in fossil fuels to enhance oil and gas recovery, to improve the direct combustion of coal and to produce synthetic oil and gas from coal and oil shale. Expanded efforts are planned in 1977 to assure the safety and reliability of nuclear power and to continue the development of breeder reactors which will make our uranium resources last for centuries. My 1977 Budget also provides for rapid growth in programs to accelerate development of solar and geothermal energy and fusion power.

-- In defense, a strengthened and vigorous program of research and development is absolutely fundamental to maintain peace in the years ahead. Our National survival depends on our continued technological edge. The quality of our military R&D program today -- and decisions on its scope and magnitude -- will directly influence the balance of power in the 1980's and beyond. Obligations for defense research and development will increase by 13 percent in FY 1977, to almost $11 billion. In the strategic area, the defense R&D program provides for continued development of the Trident submarine and missile system and the B-1 bomber. We are providing increases for cruise missiles and for defining options for a new intercontinental ballistic missile system. For our tactical forces, we will pursue a number of major programs ranging from the F-16 and F-18 fighter aircraft to a new attack helicopter, improved air defense systems, and a new tank. In addition we will strengthen our military-related science and technology effort. The combat potential of new technologies such as high energy lasers will be actively explored.

-- Through basic research, new knowledge is achieved that underlies all future progress in science and technology. My proposed budget provides an increase of 11 percent over my 1976 estimates to assure that the flow of new scientific discoveries continues. Since much of the Nation's basic research is carried out at colleges and universities, I have given special emphasis to the budget request for the National Science Foundation and other agencies that support research in these institutions. I have requested an increase of 20 percent in NSF's funding for basic research in order to underscore my strong support for such research, particularly in colleges and universities.

-- In agriculture, improving the efficiency of American food production is vital to our National well-being and to help ease critical worldwide food shortages. My Budget provides over $500 million for agricultural research including programs to increase crop yield, improve the nutrition and protein content of crops, and help find new and safer ways to protect crops from the devastating losses which are caused by pests and bad weather. Matching State funds for research at land-grant institutions will contribute an additional $400 million to the national effort. Within the agricultural research program, greater priority will be given to basic agricultural research which is the key to our longer range objectives in food production. Our agricultural research and research undertaken by others around the world can have a major effect on the world food situation for generations to come.

-- In health, basic and applied medical research provides new knowledge about causes, prevention and cure of diseases. This knowledge will make it possible to reduce the toll of human suffering, reduce expensive medical treatments, and increase the general level of health of our people. For the Department of Health, Education, and Welfare alone my Budget requests over $2.2 billion to pursue new scientific opportunities relating to cancer, heart and lung disease, arthritis, diabetes, and behavioral disturbances. It will also continue research in emerging areas of National importance such as immunology, aging, environmental health, and health services.

-- In space, the shuttle is the key to improved operational space capabilities for science, defense, and industry. My 1977 Budget provides the necessary funds to continue

development of the shuttle and to assure a balanced program in science and space applications. In the future, space technologies can further advance our National and worldwide needs for better communications, better weather forecasting and better assessment and management of our natural resources. Scientific exploration and observation in space can add immeasurably to our understanding of the universe around us.

My Budget also provides funds for continued research and development in environment, natural resources, transportation, urban development, and other fields of social and economic activity where we will support work that shows promise in meeting the problems of society and the new challenges we face as a Nation.

Prompt and favorable action by the Congress on my proposal to create the ~~proposed~~ new Office of Science and Technology Policy and to approve my 1977 Budget requests are vital to ensure that science, engineering and technology will continue to contribute effectively in achieving our Nation's objectives.

THE WHITE HOUSE,

Office of the White House Press Secretary

THE WHITE HOUSE

FACT SHEET

THE PRESIDENT'S SCIENCE AND TECHNOLOGY MESSAGE

The President today sent to the Congress a message outlining the important contribution of science and technology in achieving national objectives; calling on the Congress to complete action on legislation to establish an Office of Science and Technology Policy in the White House; and urging favorable Congressional action on the request for $24.7 billion for research and development included in his FY 1977 Budget.

BACKGROUND

° On June 9, 1975, the President transmitted to the Congress his proposal to establish an Office of Science and Technology Policy in the Executive Office of the President. On November 6, 1975, the House passed legislation acceptable to the President (H.R. 10230). On February 4, the Senate passed a bill which, with some changes, would also be acceptable. The bills are now awaiting action by a House-Senate Conference Committee.

° On January 21, 1976, the President transmitted to the Congress his FY 1977 Budget which includes a total of $24.7 billion for research and development -- an 11 percent increase over the amount estimated for 1976.

OFFICE OF SCIENCE AND TECHNOLOGY POLICY

° The legislation proposed by the President called for an Office headed by a Director who would assist the President by:

- providing advice in policy areas where scientific or technological considerations are involved;

- helping to assure that the Nation's scientific and technological capabilities are utilized effectively in achieving the Nation's goals; and

- identifying new opportunities for using science and technology to improve our understanding of national problems and contribute to their solution.

° In addition to establishing such an office, the bill passed by the House would declare a national policy on science and technology and establish a committee to appraise the overall Federal science and technology effort.

° The President indicated that he would name the Director of the new office as his adviser on science and technology.

more

(OVER)

THE PRESIDENT'S BUDGET REQUESTS FOR RESEARCH AND DEVELOPMENT

° Obligations for R&D in the FY 1977 Budget

	(billions of dollars) 1975 Actual	1976 Estimated	1977 Estimated
. Performance of R&D			
- Defense, including military-related programs of ERDA	9.6	10.6	12.0
- Space exploration and technology	2.5	2.9	2.9
- Civilian	6.9	7.8	8.6
Subtotal	19.0	21.3	23.5
. R&D facilities	.8	.9	1.2
. Total	19.8	22.2	24.7

(Further details of R&D funding and programs are provided in Special Analysis P, Federal Research and Development Programs Budget of the United States Government, 1977.)

° The President's Budget focuses Federal R&D investments so as to meet:

- Direct Federal needs, where the Government has full responsibility, as in space and national defense.

- General economic and human welfare needs, where the Federal Government must assume major responsibility because incentives are not sufficient for the private sector to invest enough to meet national needs, as in basic research, and in health, environmental, and agricultural research.

- Certain specific national needs, where the Government assists the private sector by using Federal funds to stimulate, accelerate, and augment the efforts of industry in providing needed technological options for the future, as in energy R&D.

° Private industry, foundations, universities and others also invest in R&D. The private sector accounts for nearly half of the national investment in R&D.

# # # #

Final

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Our Founding Fathers placed high value on the pursuit of knowledge and its application. They supported exploration, new methods of agriculture, the establishment of scientific societies and institutions of higher learning, measures to encourage invention, and means to protect and improve the Nation's health.

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development of the shuttle and to assure a balanced program in science and space applications. In the future, space technologies can further advance our National and worldwide needs for better communications, better weather forecasting and better assessment and management of our natural resources. Scientific exploration and observation in space can add immeasurably to our understanding of the universe around us.

My Budget also provides funds for continued research and development in environment, natural resources, transportation, urban development, and other fields of social and economic activity where we will support work that shows promise in meeting the problems of society and the new challenges we face as a Nation.

Prompt and favorable action by the Congress on my proposal to create the new Office of Science and Technology Policy and to approve my 1977 Budget requests are vital to ensure that science, engineering and technology will continue to contribute effectively in achieving our Nation's objectives.

THE WHITE HOUSE,

THE WHITE HOUSE

WASHINGTON

March 20, 1976

MEMORANDUM FOR: THE PRESIDENT

FROM: JIM CANNON

SUBJECT: MESSAGE TO THE CONGRESS ON SCIENCE AND TECHNOLOGY

Attached for your consideration is a proposed message to the Congress on Science and Technology. It urges prompt and favorable Congressional action on the request for legislation to create an Office of Science and Technology Policy and for $24.7 billion in 1977 funding for research and development programs.

The message has been reviewed by Messrs. Buchen, Friedersdorf, Goldwin, Greenspan, Hartmann, Lynn, Marsh, Scowcroft, and Seidman.

The message has been approved by Doug Smith for Mr. Hartmann.

RECOMMENDATION

That you sign the proposed message.

Attachment

THE WHITE HOUSE

WASHINGTON

March 18, 1976

MEMORANDUM FOR: JAMES CANNON

FROM: WILLIAM W. NICHOLSON WWN

SUBJECT: Approved Presidential Activity

Please take the necessary steps to implement the following and confirm with Mrs. Nell Yates, ext. 2699. The appropriate briefing paper should be submitted to Dr. David Hoopes by 4:00 p.m. of the preceding day.

Meeting: Sign Formal Transmittal of the Science and Technology Message

Date: Mon., March 22, '76 Time: 11:30 a.m. Duration: 10 mins.

Location: The Cabinet Room

Press Coverage:

Purpose:

cc: Mr. Cheney
Mr. Hartmann
Mr. Marsh
Dr. Connor
Dr. Hoopes
Mr. Nessen
Mr. Jones
Mr. Smith
Mr. O'Donnell
Mrs. Yates
Dr. Cavanaugh

EMBARGOED FOR RELEASE
UNTIL 12:30 P.M. (EST)

March 22, 1976

Office of the White House Press Secretary

THE WHITE HOUSE

FACT SHEET

THE PRESIDENT'S SCIENCE AND TECHNOLOGY MESSAGE

The President today sent to the Congress a message outlining the important contribution of science and technology in achieving national objectives; calling on the Congress to complete action on legislation to establish an Office of Science and Technology Policy in the White House; and urging favorable Congressional action on the request for $24.7 billion for research and development included in his FY 1977 Budget.

BACKGROUND

- On June 9, 1975, the President transmitted to the Congress his proposal to establish an Office of Science and Technology Policy in the Executive Office of the President. On November 6, 1975, the House passed legislation acceptable to the President (H.R. 10230). On February 4, the Senate passed a bill which, with some changes, would also be acceptable. The bills are now awaiting action by a House-Senate Conference Committee.

- On January 21, 1976, the President transmitted to the Congress his FY 1977 Budget which includes a total of $24.7 billion for research and development -- an 11 percent increase over the amount estimated for 1976.

OFFICE OF SCIENCE AND TECHNOLOGY POLICY

- The legislation proposed by the President called for an Office headed by a Director who would assist the President by:

  - providing advice in policy areas where scientific or technological considerations are involved;

  - helping to assure that the Nation's scientific and technological capabilities are utilized effectively in achieving the Nation's goals; and

  - identifying new opportunities for using science and technology to improve our understanding of national problems and contribute to their solution.

- In addition to establishing such an office, the bill passed by the House would declare a national policy on science and technology and establish a committee to appraise the overall Federal science and technology effort.

- The President indicated that he would name the Director of the new office as his adviser on science and technology.

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THE PRESIDENT'S BUDGET REQUESTS FOR RESEARCH AND DEVELOPMENT

° Obligations for R&D in the FY 1977 Budget

	(billions of dollars) 1975 Actual	1976 Estimated	1977 Estimated
. Performance of R&D			
- Defense, including military-related programs of ERDA	9.6	10.6	12.0
- Space exploration and technology	2.5	2.9	2.9
- Civilian	6.9	7.8	8.6
Subtotal	19.0	21.3	23.5
. R&D facilities	.8	.9	1.2
. Total	19.8	22.2	24.7

(Further details of R&D funding and programs are provided in Special Analysis P, Federal Research and Development Programs Budget of the United States Government, 1977.)

° The President's Budget focuses Federal R&D investments so as to meet:

- Direct Federal needs, where the Government has full responsibility, as in space and national defense.

- General economic and human welfare needs, where the Federal Government must assume major responsibility because incentives are not sufficient for the private sector to invest enough to meet national needs, as in basic research, and in health, environmental, and agricultural research.

- Certain specific national needs, where the Government assists the private sector by using Federal funds to stimulate, accelerate, and augment the efforts of industry in providing needed technological options for the future, as in energy R&D.

° Private industry, foundations, universities and others also invest in R&D. The private sector accounts for nearly half of the national investment in R&D.

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EMBARGOED FOR RELEASE UNTIL
12 30 P.M. (EST)

March 22, 1976

Office of the White House Press Secretary

THE WHITE HOUSE

TO THE CONGRESS OF THE UNITED STATES:

The desire and the ability of the American people to seek and apply new knowledge have been crucial elements of the greatness of our country throughout its 200-year history.

Our Founding Fathers placed high value on the pursuit of knowledge and its application. They supported exploration, new methods of agriculture, the establishment of scientific societies and institutions of higher learning, measures to encourage invention, and means to protect and improve the Nation's health.

In our recent history, the Nation has made major investments in research and development activities to ensure their continued contribution to the growth of our economy, to the quality of our lives and to the strength of our defense. Today there is mounting evidence that science and technology are more important than ever before in meeting the many challenges facing us.

I fully recognize that this country's future -- and that of all civilization as well -- depends on nurturing and drawing on the creativity of men and women in our scientific and engineering community.

The 1977 Budget which I submitted to the Congress on January 21, 1976, is one measure of the importance I attach to a strong National effort in science and technology. My total budget restrains Federal spending to $395 billion -- an increase of 5.5 percent over 1976. But my Budget requests $24.7 billion for the research and development activities of the various Federal agencies, an increase of 11 percent over my 1976 estimates. Included within this total of $24.7 billion is $2.6 billion for the support of basic research, also an increase of 11 percent. Such long-term exploratory research provides the new knowledge on which advances in science and technology depend. I urge the Congress to approve my budget requests.

I also urge the Congress to pass legislation to establish an Office of Science and Technology Policy in the Executive Office of the President. This will permit us to have closer at hand advice on the scientific, engineering and technical aspects of issues and problems that require attention at the highest levels of Government.

On June 9, 1975, I submitted a bill to the Congress that would authorize creation of such an office. The director of this new office would also serve as my adviser on science and technology, separating this responsibility from the many demands of managing an operating agency. On November 6, 1975, the House of Representatives passed an acceptable bill, H.R. 10230, which authorizes the new office. On February 4, 1976, the Senate passed a similar

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(OVER)

bill which, with some changes, would also be acceptable. Those bills are now awaiting action by a House-Senate Conference Committee. Early agreement by the conferees on a workable bill will permit me to proceed without further delay in establishing the Office of Science and Technology Policy.

In addition to its direct support of research and development, the Federal Government has a responsibility to ensure that its policies and programs stimulate private investments in science and technology and encourage innovation in all sectors of the economy -- in industry, the universities, private foundations, small business, and State and local Governments. We pursue this objective through our tax laws, cooperative R&D projects with industry, and other incentives.

Industry and other elements of the private sector now support nearly 50 percent of the Nation's total research and development effort and we must avoid displacing these important investments.

The role of industry is particularly important. In our competitive economic system, industry turns new ideas from laboratories into new and improved products and services and brings them to the marketplace for the Nation's consumers. Industry has built successfully on advanced developments of the past and provided new products and services of great economic and social value to the Nation. This can be seen in electronics, computers, aircraft, communications, medical services and many other areas.

My 1977 Budget gives special attention to research and development for energy and defense and to basic research. It also continues or increases support for other important areas such as agriculture, space, and health where research and development can make a significant contribution.

-- In energy, an accelerated research and development program is vital to our future energy independence. My 1977 Budget proposes $2.6 billion for energy research and development -- a 35 percent increase over 1976. These funds, together with the efforts of private industry, provide for a balanced program across the entire range of major energy technologies. Major increases are proposed in energy conservation to achieve greater energy efficiency. Additional funding is provided in fossil fuels to enhance oil and gas recovery, to improve the direct combustion of coal and to produce synthetic oil and gas from coal and oil shale. Expanded efforts are planned in 1977 to assure the safety and reliability of nuclear power and to continue the development of breeder reactors which will make our uranium resources last for centuries. My 1977 Budget also provides for rapid growth in programs to accelerate development of solar and geothermal energy and fusion power.

-- In defense, a strengthened and vigorous program of research and development is absolutely fundamental to maintain peace in the years ahead. Our National survival depends on our continued technological edge.

The quality of our military R&D program today -- and decisions on its scope and magnitude -- will directly influence the balance of power in the 1980's and beyond. Obligations for defense research and development will increase by 13 percent in FY 1977, to almost $11 billion. In the strategic area, the defense R&D program provides for continued development of the Trident submarine and missile system and the B-1 bomber. We are providing increases for cruise missiles and for defining options for a new intercontinental ballistic missile system. For our tactical forces, we will pursue a number of major programs ranging from the F-16 and F-18 fighter aircraft to a new attack helicopter, improved air defense systems, and a new tank. In addition we will strengthen our military-related science and technology effort. The combat potential of new technologies such as high energy lasers will be actively explored.

-- Through basic research, new knowledge is achieved that underlies all future progress in science and technology. My proposed budget provides an increase of 11 percent over my 1976 estimates to assure that the flow of new scientific discoveries continues. Since much of the Nation's basic research is carried out at colleges and universities, I have given special emphasis to the budget request for the National Science Foundation and other agencies that support research in these institutions. I have requested an increase of 20 percent in NSF's funding for basic research in order to underscore my strong support for such research, particularly in colleges and universities.

-- In agriculture, improving the efficiency of American food production is vital to our National well-being and to help ease critical worldwide food shortages. My Budget provides over $500 million for agricultural research including programs to increase crop yield, improve the nutrition and protein content of crops, and help find new and safer ways to protect crops from the devastating losses which are caused by pests and bad weather. Matching State funds for research at land-grant institutions will contribute an additional $400 million to the national effort. Within the agricultural research program, greater priority will be given to basic agricultural research which is the key to our longer range objectives in food production. Our agricultural research and research undertaken by others around the world can have a major effect on the world food situation for generations to come.

-- In health, basic and applied medical research provides new knowledge about causes, prevention and cure of diseases. This knowledge will make it possible to reduce the toll of human suffering, reduce expensive medical treatments, and increase the general level of health of our people. For the Department of Health, Education, and Welfare alone my Budget requests over $2.2 billion to pursue new scientific opportunities relating to cancer, heart and lung disease, arthritis, diabetes, and behavioral disturbances. It will also continue research in emerging areas of National importance such as immunology, aging, environmental health, and health services.

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-- In space, the shuttle is the key to improved operational space capabilities for science, defense, and industry. My 1977 Budget provides the necessary funds to continue development of the shuttle and to assure a balanced program in science and space applications. In the future, space technologies can further advance our National and worldwide needs for better communications, better weather forecasting and better assessment and management of our natural resources. Scientific exploration and observation in space can add immeasurably to our understanding of the universe around us.

My Budget also provides funds for continued research and development in environment, natural resources, transportation, urban development, and other fields of social and economic activity where we will support work that shows promise in meeting the problems of society and the new challenges we face as a Nation.

Prompt and favorable action by the Congress on my proposal to create the new Office of Science and Technology Policy and to approve my 1977 Budget requests are vital to ensure that science, engineering and technology will continue to contribute effectively in achieving our Nation's objectives.

GERALD R. FORD

THE WHITE HOUSE,

March 22, 1976.

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