The original documents are located in Box 32, folder "Science and Technology Policy, Office of (2)" of the James M. Cannon Files at the Gerald R. Ford Presidential Library.

THE WHITE HOUSE

WASHINGTON

March 5, 1975

MEMORANDUM FOR : DONALD RUMSFELD
JAMES LYNN
PHIL BUCHEN
JACK MARSH

FROM : JIM CANNON

Here is a copy of the revised Science and Technology memorandum from the Vice President to the President.

Would you give me your comments on this revision so that we can make a summary report to the President?

Since the President is meeting with a group of scientists on Tuesday, March 11, 1975, I would be grateful if you could give me your comments by Friday morning, March 7, 1975.

Attachment

THE VICE PRESIDENT
WASHINGTON

March 3, 1975

MEMORANDUM FOR THE PRESIDENT

FROM: The Vice President

SUBJECT: Re-establishing a Science and Technology Advisory Apparatus in the Executive Office of the President

This is in response to your request for a memorandum concerning the re-establishment of a science and technology advisory apparatus in the Executive Office of the President.

INDEX

PROBLEM

PROBLEM

The dissolution of the science advisory structure in the White House in 1973 was greeted with great dismay by the scientific community. Pressure is growing steadily from scientific community leaders for action to restore some science presence in the White House.

A June 1974 report by a special committee of the National Academy of Sciences, recommending the creation of a Council on Science and Technology in the Executive Office of the President, has heightened this pressure and has made likely Congressional action to re-establish some kind of scientific and technical policy organization in the Executive Office of the President.

B

BACKGROUND

BACKGROUND

President Truman

The concept of providing scientific and technical advice directly to the President in a formal way was initiated by President Truman in 1951. The Scientific Advisory Committee in the Office of Defense Mobilization met occasionally with the President and, in spite of its location in the Department of Defense, had direct access to the President. President Truman, himself, recognized this function of the group and dealt with them as personal advisers.

President Eisenhower

The "Sputnik" crisis of 1957 created a political situation that made it advisable to locate a scientific advisory structure in the White House itself. Accordingly, the scientific advisory function which was located in the Office of Defense Mobilization was moved to the White House and greatly expanded. An official with the title of Science Adviser to the President was appointed and a President's Science Advisory Committee was established.

The President's Science Adviser also served as Chairman of the new interagency Federal Council on Science and Technology, which took over the function of coordinating all of the scientific research and technical development going on with the Federal Government.

President Kennedy

In 1962, under a reorganization measure of the Executive Branch, President Kennedy created a large staff office in the White House under the Science Adviser to assist in advising the President and in overseeing the burgeoning Federal responsibility for science and technology. This office, called the Office of Science and Technology, also served as the staff arm of the President's Science Advisory Committee.

The Office of Science and Technology and the President's Science Advisory Committee were remarkably successful in heightening the overall interest in scientific and technical developments among the various Departments of the Federal government. In fact, their creation sparked the establishment of line offices in charge of scientific research and development in all of the operating Departments of the Federal government.

Through the early and middle 1960s, the Office of Science and Technology enjoyed a fairly prominent position in the White House, as the space and defense programs dominated the national scene. As the national focus shifted to the economic and social problems of the late Sixties, however, the role of the Office of Science and Technology in national policy formulation became less clear and its influence in the White House less substantial.

President Nixon

During the late Sixties and the early Seventies, the Office of Science and Technology became more and more of a "special pleader" for its science constituency -- advocating positions and ideologies not always consistent with Administration policy. Instead of serving to advise the President, the Office of Science and Technology often became his critic.

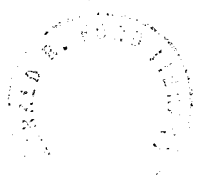
Finally, in July 1973, President Nixon abolished the position of Science Adviser, the Office of Science and Technology and the President's Science Advisory Committee. The functions of the Science Adviser were given to the Director of the National Science Foundation and those of the Office of Science and Technology and the President's Science Advisory Committee transferred to the National Science Foundation in civilian areas and the National Security Council in military areas.

Although many scientists viewed the dissolution of the science advisory structure in the White House as purely politically motivated, there were several good reasons for making some kind of change.

1. By the early 1970s, virtually all Federal Departments had developed their own scientific and technical arms. This significantly lessened the need for a large scientific and technical staff in the White House (which, after all, had no line functions).

2. The failure of the Office of Science and Technology's staff to relate to the White House policy formulating procedure made it difficult to integrate that Office's recommendations with those of other advisory functions in the White House. Therefore, as emerging national problems began to include components other than "hard" technology, the Office of Science and Technology became less effective and useful in contributing to Presidential-level decision-making.

3. As the Office of Science and Technology's allegiance to its constituency grew, its effectiveness in serving the President diminished.



FUNCTIONS

FUNCTIONS

The scientific community is now generally united in the belief that the President should have available to him an independent source of scientific and technological judgment on a wide range of areas, including:

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

They have pointed out that a White House science and technology advisory apparatus could perform the following vital functions:

1. Advising the President in the formulation and review of national policies in areas involving science and technology development. Energy, transportation, environmental planning, health care delivery and food supply are examples of these.

2. Providing technical advice for the President and his staff, including the Domestic Council, the Council of Economic Advisers, and the Office of Management and Budget, on specific issues and questions dealing with science and technology.

3. Working with the Federal Council on Science and Technology in coordinating the large existing in-house capability of the Federal government in scientific and technological research and development. There are approximately 100,000 people employed in Federal research and development establishments, and it is important to see that this large and sophisticated work force is properly and effectively employed.

4. Identifying and reporting on gaps in scientific research and technological developments in the public and private sector and initiating studies where appropriate.

5. Providing the President with "early warning" of problems, opportunities or developments that have a scientific or technological component, including some longer-range forecasting of such problems, opportunities and developments.

6. Consulting with the President on the appointments of various scientific and technical officials in the Federal agencies.

Moreover, the scientific community is now in full agreement that the proper function of such an advisory apparatus is to advise and service the President -- not to be public advocates.

STRUCTURE

D

STRUCTURE

OPTION 1. CREATION OF A COUNCIL OF TECHNOLOGY AND SCIENCE ADVISERS

The President could propose legislation creating a 3-member Council of Technology and Science Advisers in the Executive Office of the President. The Council would be similar in function to the Council of Economic Advisers. The members of the Council would be appointed by the President from among the different disciplines in the science and technology fields. The Chairman of the Council would also serve as the President's Technology and Science Adviser.

(VARIATION: Some have proposed creation of a 7-member Council, composed of four Presidential appointees and the Presidents of the National Academy of Science, the National Academy of Engineering and the Institute of Medicine serving ex officio.)

STAFFING: The Council's staff would consist of an Executive Assistant to the Chairman and a number of professional assistants (15-20) and supporting clerical staff. The Council would also be authorized to establish ad hoc committees composed of governmental and/or non-governmental experts to do in-depth analyses of selected problems and issues.

FISCAL IMPLICATIONS: $2.5 - $5 million annually.

ARGUMENTS FOR:

-- In essence, this is the approach embodied in the "Kennedy bill" passed by the Senate last year. It incorporates the recommendation of the National Academy of Science's special committee, and is fully responsive to the scientific community's demands.

-- This assures greater depth in the science and technology advisory apparatus and greater representation and input from the various disciplines in the science and technology field.

-- This would ensure an ongoing structure in the Executive Office of the President fully capable of rendering scientific and technological advice or performing such other related responsibilities as the President may assign to it.

-- The authority to create ad hoc groups permits tapping of the resources of the scientific community.

ARGUMENTS AGAINST:

-- This structure might be difficult to integrate into the existing White House operation.

-- It is more susceptible to "politization" both as to its internal operation (with each of the three members representing the views of his own constituency) and as to its relationship with the Administration (because of the structural autonomy of a council).

-- It would result in a visible increase in the size and budget of the White House.

-- This structure is larger than is necessary to meet the problem and is also unwieldy.

OPTION 2. CREATION OF AN OFFICE OF TECHNOLOGY AND SCIENCE

The President could propose legislation creating an Office of Technology and Science in the Executive Office of the President. The Director of the office would be a highly qualified scientist appointed by the President, who would serve also as the President's Technology and Science Adviser.

STAFFING: In addition to the Director, the office would have a Deputy Director (for administration) and, as is required

- -- up to five Assistant Directors (for various specialties);
- -- up to twelve professional assistants; and
- -- supporting clerical staff.

The Director would also be empowered to establish ad hoc committees composed of governmental and/or nongovernmental experts to do in-depth analyses of selected problems and issues.

FISCAL IMPLICATIONS: $1 - $1.5 million annually.

ARGUMENTS FOR:

- -- This is largely responsive to the legitimate demands of the scientific community and could, therefore, be expected to satisfy the Congress.

- -- It assures to the President and his staff the availability of a broad range of scientific and technical expertise. This would be tremendously useful to the Domestic Council, the Council of Economic Advisers, the Office of Management and Budget, et al.

-- This structure will help to assure the development of an ongoing scientific and technological capacity in the Executive Office of the President.

-- The authority to create ad hoc groups permits tapping of the resources of the scientific community.

-- This structure is sufficiently flexible to permit growth of in-house capacity when and as necessary.

ARGUMENTS AGAINST:

-- This would involve Congressional action to implement (and, of course, to undo).

-- There are those who feel that this would unduly increase the size of the President's staff.

-- Some contend that the need for a science and technology capacity in the White House does not justify the creation of an office.

OPTION 3. APPOINTMENT OF A SCIENCE AND TECHNOLOGY ADVISER TO THE PRESIDENT

The President could, by administrative action, appoint a full-time Science and Technology Adviser to the President to serve on the White House staff.

STAFFING: The Science and Technology Adviser would be authorized a few (1-3) professional assistants and supporting clerical staff, but would otherwise have to rely on National Science Foundation professional staff for support.

FISCAL IMPLICATIONS: $100,000 - $200,000 annually.

ARGUMENTS FOR:

-- This could be accomplished by administrative act of the President.

-- It would relieve some of the pressure for Congressional action on this issue.

-- This would make available to the President and his staff at least some independent scientific and technological expertise.

-- This would be relatively inexpensive and would not significantly increase the size of the President's staff.

ARGUMENTS AGAINST:

-- This approach would satisfy neither the scientific community nor the Congress and, therefore, it could not be expected to avert independent Congressional action on the issue.

-- It is doubtful whether, under this structure, the Science and Technology Adviser could "cover the waterfront." Therefore, pressure to increase the size and scope of this apparatus will continue.

-- This structure is not suitable for the development of an on-going scientific and technological capacity in the White House.

-- This structure is not suitable for tapping the resources of the scientific community on an interim basis since the Science and Technology Adviser would not be empowered to create ad hoc panels for special research purposes.

PRESIDENTIAL DECISION

Proceed with further development of:

Option 1 _____

Option 2 _____

Option 3 _____

Discuss _____

[March 1975]

[COMMITTEE PRINT]

A Proposed

NATIONAL SCIENCE POLICY AND ORGANIZATION ACT OF 1975

Prefaced by

OLIN E. TEAGUE, *Chairman*

OF THE

COMMITTEE ON SCIENCE AND TECHNOLOGY
U.S. HOUSE OF REPRESENTATIVES

NINETY-FOURTH CONGRESS

FIRST SESSION

Serial C

Printed for the use of the Committee on Science and Technology

U.S. GOVERNMENT PRINTING OFFICE

48-694 WASHINGTON : 1975

CONTENTS

FOREWORD

The issues surrounding Federal policies, plans and organization for Science and Technology have been the subject of considerable Committee study, in general, for over a decade—and specifically since 1970.

As a result, the proposed legislation, the text of which is included herein together with an explanatory statement of its background and rationale, was introduced in the House, March 6, 1975.

It is believed that the statement, the bill and the accompanying analyses will prove to have genuine utility for those interested in the evolution of Science and Technology policy and the concepts which may bear upon it.

SUMMARY COMMENT

The proposed bill is intended to provide a focus for mature discussion of a national need. It has been intentionally framed to incorporate as many substantive suggestions as the Committee's record indicates have reasonable support. Advice on its content has been drawn from many well-informed sources. Nevertheless, it is not to be considered a finished product, but rather a stepping stone toward the implementation of a statutory science policy.

Four important devices are suggested in this legislation:

- A comprehensive statement of national policy for science and technology.
- A Council of Advisers for Science and Technology to help crystallize and effect policy at the highest levels of government.
- A Department of Research and Technology Operations to bring together certain Federal research-related activities through a unified and efficient governmental structure.
- A Science and Technology Information and Utilization Corporation to promote full, prompt and efficient access by the public to the benefits of research and development.

Statement of Mr. Teague on the Proposed National Science Policy and Organization Act of 1975

I have introduced, with the cosponsorship of the ranking minority member of the Committee on Science and Technology, Mr. Mosher, a bill entitled "The National Science Policy and Organization Act of 1975."

This is the first piece of legislation dealing with fundamental science policy matters to result from the work of our Committee. It comes after five years of comprehensive investigation and study which began with eight months of subcommittee effort in 1970 and includes two series of full Committee hearings in 1973 and 1974. It draws from two prior Committee reports: "Toward a Science Policy for the United States" issued by the Science, Research and Development Subcommittee in October 1970, and "Federal Policy, Plans and Organization for Science and Technology" issued by the full Committee in July 1974.

In summary, the bill seeks to accomplish four things.

First, it endeavors to enunciate a well-rounded national science policy. (I am not aware of any prior statutory effort of this specific character.) *Second*, it would establish a Council of Advisers on Science and Technology in the Executive Office of the President—but with specially built-in discretionary powers as to use and organization vested in the President. *Third*, it would provide administrative unity and coordination of the essentially "R&D" agencies of government, as well as government-wide oversight and budget review of "R&D" activities, through the innovation of a staff-function, cabinet-level Secretary of Research and Technology Operations. *Fourth*, it would undertake to consolidate and make compatible the operations of the various Federal science information agencies by merging them into a single government corporation with special ties to the private sector.

* * * * * * *

I do not believe it is an exaggeration to describe this legislation as a product of the most thorough congressional scrutiny yet accorded to the focused issue of policy and planning by the Federal government as to its own role in handling science and technology.

Nonetheless, it is emphasized that the bill is by no means cast in concrete. It does not represent a fixed position on the part of its sponsors. It is not necessarily a reflection of the views of the Committee on Science and Technology or any of its members.

But the bill *is*, in all respects, founded on discussion, hearings, reports and recommendations which the Committee has had placed before it by a wide variety of external parties, public and private. It seeks to present all the major, positive and reasonable suggestions dealing with the aforementioned "focused issue."

It is on this basis that the bill is offered for discussion and critique. It is our hope and expectation to undertake an additional phase of full

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committee hearings on this and possibly similar bills during the current session.

* * * * * * *

Having mentioned the "what" and "how" of the proposed legislation, let me turn briefly to the "why" of it.

There are many reasons which form the backdrop of this bill. They can be found at frequent intervals throughout the three volumes of Committee hearings and the two Committee reports which comprise some 2,500 pages of testimony, data, findings and recommendations.

The following reasons, however, would seem to be cardinal to the issues of the day.

(1) We recognize the prominent role which applied science has played in producing the great problems of modern civilization—the crowding and congestion, the excessive gobbling of natural resources, the dangerously shifting foundations undergirding the economy, the disruptive social and moral influences abroad in the land, and so on. Indeed, such recognition was directly responsible, and in large measure, for the concept of Technology Assessment and the formation of the legislative Office which now bears that name. We know the need to understand as best we can *all* the probable impacts of technologies as they develop—good and bad.

(2) We are further aware, particularly as we look about and see the critical problems facing us with regard to food, energy, materials, security, economic strength and the like, that the solutions to our problems depend in some way upon the judicious use of better technology. Former Presidential science adviser Dr. Edward E. David has put it succinctly:

"Can we be sure that science and technology will find the answers? Can we be sure that solutions to our problems exist? No, but we can be sure that nothing but science and technology can find them if they do exist.

"To put it as bluntly as possible: science and technology must answer our problems. If they don't, nothing else will."

This may be overstated, but its germaneness to the needs of our era has been recognized, openly or tacitly, by every Administration of the past 45 years.

(3) We have, finally, arrived at the solid conclusion that a statutory base of some kind is essential to bring order and stability to the government's use of science and technology. For science and technology are an element of our contemporary culture as pervasive and important as economics or education or labor or environment. Like them, science and technology are interwoven into all the major missions with which government is involved. Like them, science and technology should be fabricated concretely and statutorily into the managerial and policy structure of our national government.

We have no desire to force a science advisory mechanism on the Executive Office which the President may find distasteful or foreign to his mode of operation. That is wheel-spinning. But we are inclined to believe—having watched the handling of science and technology on an ad hoc basis by a long succession of Administrations—that a firm science and technology policy is needed; a dependable though flexible science advisory system is needed; and a high-level, influential base for the definition and coordination of such governmental activities as are inherently devoted to or dominated by science and technology is also needed.

Our evidence strongly suggests that these are all integral parts of a single theme and should be treated together.

A more detailed discussion and description of the proposed legislation follows:

* * * * * * *

BACKGROUND OF THE BILL

The purpose of this bill is to define the national goals to be served by a science policy, to prescribe the policy, to identify the principles, procedures and institutions to implement the policy, and to assure the maximum benefits which science and technology have to offer.

At the heart of the bill is recognition that the many scientific and technological factors shaping our nation's progress at home and abroad should systematically be taken into account in the national decision process.

It has been said that statements of goals in a national science policy cannot be fashioned because there is no consensus on them; they are too complicated and change too fast. The bill rejects this view. It proceeds on the assumption that there is more general agreement on national policy goals and principles, scientific or otherwise, than critics suggest. While the goals for science and technology which are suggested may not reflect a precise consensus, the bill is a starting point.

When the Constitution was written, one of its proposals was to "promote the Progress of Science and useful Arts." What is proposed here is to take into account nearly two centuries of development of science and technology, the great expansion in the role of science and technology, and the need to achieve a coherent structure to direct the future uses of science and technology for public purposes. In addition, the need to maintain a healthy scientific and technological structure in order to serve public purposes is also recognized.

There are two reasons why it is important to set goals and plan ahead in this area.

First, experience tells us that great achievements are possible through the orderly employment of science and technology for public purposes. But we also know that we can't do everything. We must have priorities. We must learn how to set first things first. It is impossible to do this unless we know what the goals are. So we must set goals and then build priorities around them.

Second, the greatest wastes of public funds usually stem from (1) programs which conflict with each other or cancel each other out, (2) programs which are terminated before they produce useful results, and (3) programs which have turned out to be unproductive and which should be terminated. A system of planning toward priority goals can help eliminate such wastes.

* * * * * * *

It is possible to view this bill in several ways.

It can be a source of pride in that it attempts to define goals and procedures of our national effort in science and technology, and because the end product could be an important contribution to the nation's strength, health and well-being.

It can be regarded with humility in that we still have far to go, and also because the product in its present form is the result of the combined efforts of hundreds of scientists, technologists, and concerned members of the public, extending back for more than a decade.

It can be viewed with respect not only because of the intellectual challenge it poses and its importance for our national well-being, but also because it is an obligation of the Congress to accept the challenge. The Constitution gives us this responsibility, and it is time we met it.

* * * * * * *

The bill has had a much longer evolution than has been recited thus far. For example:

In 1963, a first overview hearing on government and science—yielding six major reports—was begun by the Committee on Science and Astronautics, now the Committee on Science and Technology.

In 1965, the Committee commissioned a study of basic research and national goals from the National Academy of Sciences.

In 1966 the Academy was asked to undertake a second report, on applied research and technological progress.

In 1967 and 1968 the Committee inaugurated four major studies and conducted the first of four extensive sets of hearings on technology assessment and technology policy-making. During this period an extensive examination of program management by the National Science Foundation was also completed. The first of these two investigations led to the creation of the Office of Technology Assessment: the second led to a revision and streamlining of the NSF charter.

In 1969, a study of centralization of Federal science activities was undertaken and a comprehensive report issued.

In 1970–74, in addition to the Committee's own activities involving science policy as described earlier, we requested and received three special study reports on different phases of the problem from the American Association for the Advancement of Science, the Industrial Research Institute and the Science Policy Research Division of the Congressional Research Service.

EXPLANATION OF THE BILL

The bill has five titles; four are substantive and one is technical. Title I is a statement of national science policy.

Nothing has been invented by the Committee for this Title. It represents a culling of the testimony of witnesses, a survey of the best literature available, and the judgment of professional people throughout the scientific and technological community. Perhaps the main issue regarding this Title is not its substance but whether or not the Congress should attempt to formulate and promulgate a national policy for science and technology. There are arguments both ways.

The bill asserts an obligation of Congress to set the policy of the Federal government which the President will execute. Title I puts into explicit language a set of science and technology policies for congressional and public consideration. What is offered is a first try at a very large, difficult, and perhaps controversial task—a specific delineation of national goals in science and technology plus policies and procedures for achieving them.

The bill proposes to relate these goals to the still broader goals of our society. For if we do not ensure that science and technology serve

our goals as a nation, we are ignoring the lessons of history. The principle proposed here is that the expenditure of public funds must be for definable and accepted public purposes, understood and agreed.

* * * * * * *

Title II of the bill would make available to the President a new instrument for translating into action the policies enunciated. This is a Council of Advisers on Science and Technology. The intention is to design a body whose collective wisdom will focus on ways to use the resources of science and technology to advance the programs of the President, to create a central point for policy within the Executive Office, to provide a scientific input for the deliberations of other Councils within that Office, to advise the President and the Congress of current progress and long-range plans and opportunities for the social uses of science and technology, and to evaluate the effectiveness of all Federal research and development programs.

The rationale here is not to insist upon a particular style of scientific support for the President, but to suggest a method of mobilizing expertise which will be clearly advantageous and will commend itself to the Executive Office.

A major factor, of course, is to build a coordinate relationship in science between the Executive Branch and the Congress. Committees of Congress with scientific and technological concerns need the advice and planning suggestions that the proposed Council should be able to deliver. Congress would also be in a better position to meet the scientific and technological program needs of the Executive.

Under this bill, the President could use the Chairman of the Council as a personal science adviser if he so desired. In any case, the Chairman would speak for the best public use of science and not as an advocate for science.

Most important, this Title carries a limited reorganization authority so that the President (or his successors) may revise the Advisory mechanism, unless Congress dissents, to suit his particular needs and methods.

* * * * * * *

Title III of the proposed statute is a new variation of a concept first suggested about a century ago and periodically revived in one form or another ever since. It is the creation of a Department of Research and Technology Operations.

Unlike previous proposals for such a Department, the present scheme does not call for the transfer to it of most scientific and technological functions which support the missions of existing departments. While the new Department would stand ready to assist other departments in the conduct of their scientific activities on request, and to review the total allocation of government funds to research and development activities, it would in no way usurp the scientific decisionmaking and operational functions of other departments.

In the case of particular agencies whose fundamental purposes are scientific or technological, a consolidation in the new Department is proposed.

The rationale is that the need for new and often massive scientific and technological programs has been repeatedly demonstrated over the past three-quarters of a century. We have seen various new agencies created to manage such programs, sometimes loosely attached to an

existing Department, and in recent years more often made a separate agency.

In the first category are the National Bureau of Standards, the Weather Bureau. and then the National Oceanic and Atmospheric Administration. In the second category are the Atomic Energy Commission, the National Science Foundation, the National Aeronautics and Space Administration, and most recently the Energy Research and Development Administration.

As time goes on, it is likely that more and more new technological enterprises will need to be added to this roster for the encouragement of technologies only dimly perceived today. The burden of the President is heavy enough without the creation of additional new agencies reporting separately to the White House. At the same time, management of large scientific enterprises within the administrative structure of existing departments can be difficult when their relationships are not obviously and closely functional. Gathering these two classes of research organizations within a single Department should result in improved administration. It should also assure informed, qualified, and uniform supervision of the proliferating "R&D" enterprises within the Executive branch—as well as provide a place in the Executive branch for further additions of function without creating new independent agencies unless and until the need for such has been clearly established.

The agencies comprising the Department would retain their administrative structure; their missions would be unchanged; they would control their operations as they now do—subject to the "general supervision and direction" of the Secretary. The functions of the latter far transcend this activity, particularly in having annual review and oversight responsibilities for all Federal "R&D" statutes, administrative regulations and budgets—plus general technology assessment responsibilities within the Executive branch.

Finally, it is here, at Cabinet level, that the role of advocacy for science and technology settles in—where the voice for the scientific mission could be heard with consistency, clarity, relevancy, and influence. That voice does not exist today.

Admittedly, the concept of the Department is not traditional. It is more of a staff than a line operation. It has not been tried before. However, we believe it should receive close study and is worthy of careful consideration.

* * * * * * *

Title IV of the proposed bill would establish one other institution to be added to the agencies gathered by Title III into the new Department. This is an institution to provide a service which has been repeatedly sought by Congress since at least 1950.

It is a plan for a corporation to insure the fullest possible use of the scientific and technological information generated at public expense.

The reason for this Title is to assure that such information should not gather dust in files, but should be put to use as promptly and as efficiently as possible.

Moreover, the nature of the information process is such that it requires close cooperation between government and private entities. Thus the corporation is directed to establish close liaison with all pertinent elements of the private sector.

Abundant evidence has shown that information management today is resulting in wasteful neglect of available knowledge and the funding of needless research to repeat findings already in the literature. This waste should not be tolerated.

Some students of the future predict that national strength in the next century will be determined by the skill with which the nations of the world manage their information resources. This is not hard to believe. We were fortunate, for example, in World War II that certain scientific information was so neglected in Germany that its considerable advantage in early atomic science never won credence in the upper reaches of the Nazi government. The biggest development in the glass industry in the past 50 years—the float glass process—was based on an American patent, but it was developed in England. The patent was ignored in this country for more than half a century. The Kroll Process for producing titanium was similarly neglected for nearly 40 years.

Sometimes we in Congress, in our efforts to promote efficiency and economy, have tended to constrain the dissemination of scientific and technological information by government agencies. But this is a clear example of penny wise, pound foolish. When we pay millions for a piece of research, we should be willing to pay a sufficient fraction of that amount to insure that the fruits of the investment are fully utilized.

The rationale of Title IV is that scientific information management is recognized by the Congress as a vital part of the whole scientific and technological process. It must be efficiently carried out. We are abundantly supplied with many technologies for managing, sorting, retrieving, and transmitting information. But we need a channel through which to combine the best of these technologies with the human skills of judgment, discrimination, information-structuring, and up-dating. History shows that leadership in any science is quickly lost unless it is strongly supported and pursued.

* * * * * * *

In summary. The proposed bill is intended to provide a focus for mature discussion of a national need. It has been framed with care. Advice on its content has been drawn from many well-informed sources. Nevertheless, it is not to be considered a finished product, but rather a stepping stone toward the implementation of a genuine science policy.

Four important innovations are being offered in this legislation: a comprehensive statement of national policy for science and technology; a Council of Advisers for Science and Technology to help crystallize and effect policy at the highest levels of government; a Department of Research and Technology Operations to bring together certain related activities through a unified and efficient governmental structure; and a Science and Technology Information and Utilization Corporation to promote full, broad and efficient access by the public to the benefits of research and development.

In inviting comment and suggestions, it is hoped that the observations offered will aim to better the product, not weaken it. We have come a long way in our understanding of the problem of the public use of science and technology. We must improve our abilities to put that knowledge to work.

TEXT OF THE NATIONAL SCIENCE POLICY AND ORGANIZATION ACT OF 1975

A BILL To establish a science and technology policy for the United States, to provide for scientific and technological advice and assistance to the President, to provide adequate administrative organization to assure effective Federal support and utilization of research and development, to amend the National Aeronautics and Space Act of 1958, to amend the National Science Foundation Act of 1950, and for other purposes

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

SHORT TITLE; TABLE OF CONTENTS

Section 1. This Act, with the following table of contents, may be cited as the "National Science Policy and Organization Act of 1975."

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TITLE I—NATIONAL SCIENCE POLICY

FINDINGS

SEC. 101. (a) The Congress hereby finds and declares—

(1) that the general welfare, the economic growth and stability of the Nation and its security, the efficient utilization and conservation of the Nation's resources, and the promotion of the progress of science and the useful arts, upon which the very functioning of government and society depend, require the vigorous and perceptive employment of national science and technology; and

(2) that the complexity and magnitude of scientific and technological factors impinging on the course of national and international events requires that provision be made to incorporate scientific and technological knowledge, selectively, into the national decisionmaking process.

(b) As a consequence, the Congress hereby finds and declares that the Nation's goals for science and technology should include, without being limited to, the following:

(1) demonstrating world leadership by enlarging the contributions of American science and technology to the knowledge of man and his universe;

(2) increasing the efficient use of essential materials and products, and generally contributing to economic opportunity, stability, and appropriate growth;

(3) contributing to the national security;

(4) improving the Nation's health and medical care;

(5) preserving, fostering, and restoring a healthful and esthetic natural environment, housing, and urban systems; and

(6) making the discoveries of science and technology widely available for positive and beneficial use.

DECLARATION OF POLICY

Principles

SEC. 102. (a) In view of the foregoing, the Congress declares that it is the policy of the United States to promote the development of a national science policy which comprises the following principles:

(1) the continuing formulation of a national strategy as to the appropriate scope, level, directions, and extent of science and technology efforts, based upon the continuing study of the science and technology goals and policies of the United States while drawing upon the views of States, municipalities, and representative public groups;

(2) the enlistment of science and technology to foster a healthy economy in which the directions of growth are compatible with the use of resources and with the preservation of a benign environment;

(3) the mobilization of science and technology to further United States diplomatic objectives and assure the adequacy and effective global allocation of raw materials, food, and energy, while maintaining a proper balance, in the development and export of technology, between aid to lagging foreign economies and maintenance of an equitable balance in world trade;

(4) the training and education of adequate numbers of scientists, engineers, and technologists and ensuring their full utilization, including retraining; and

(5) the encouragement of person-to-person and other interchange of scientific information in the national and the world scientific communities.

Implementation

(b) To implement the policy enunciated in subsection (a) of this section, the Congress declares that:

(1) There should be a focal center in the executive branch, to guide executive agencies in mobilizing resources for essential science and technology programs, to present to the Congress the justification of such programs, to secure appropriate funding for those programs, and to systematically review Federal science policy and programs and recommend legislative amendment thereof as appropriate. A major element of this endeavor should be an advisory mechanism within the Executive Office of the President so that the Chief Executive may have available to him independent, expert judgment and assistance on policy matters which require accurate assessments of the complex scientific and technological components involved.

(2) It is a responsibility of the Federal Government to ensure prompt, effective, reliable, and systematic transfer of science and technology information by such appropriate methods as the funding of technical evaluation centers, cost-sharing of information dissemination programs conducted by industrial groups and technical societies, and assistance in the publication of properly certified science and technology information. In particular, it is recognized as a responsibility of the Federal Government not only to coordinate and unify its own science information systems, but to facilitate the close coupling of institutional scientific research with industrial application of the useful findings of science.

(3) It is further an appropriate Federal function to support science and technology efforts which are intended to provide results beneficial to the public welfare but which may yield no commercially marketable product.

(4) Science and technology activities which may be properly centralized in the Federal Government should be distinguished from those in which interests are shared with State and local governments and the private sector. Federal preemption of such fields should be avoided by establishing cooperative relationships

that enable the sharing of science and technology decisionmaking, funding support, and program planning and execution, among all interested elements of society.

(5) A formal procedure should be developed to determine what level of national effort in science and technology should be sustained, taking into account competing public needs and available resources.

(6) While granting the need for pluralism within and among Federal, State, local, and nongovernmental activities in science and technology, it is essential that means be proportioned to ends in the conduct of national science and technology programs. Such programs should be reviewed by a single technically qualified institution to assure rational allocation of funds and resources, to identify public problems and objectives, to anticipate future concerns to which science and technology can contribute, and to devise strategies for the conduct of science and technology for these purposes.

(7) Comprehensive legislative support for the national science and technology effort requires that the Congress be regularly informed of the condition, health and vitality, and funding requirements of science and technology, the relation of science and technology to changing national goals, and the need for legislative modification of the Federal science endeavor and structure at all levels.

Procedures

(c) The Congress further declares that, in order to expedite and facilitate the implementation of the policy enunciated in subsection (a) of this section, the following coordinate procedures are of paramount importance;

(1) Federal procurement policy should encourage the use of science and technology to foster frugal use of materials, energy, and environment; to enhance product performance; and to promote economy.

(2) Explicit criteria, including cost-effectiveness principles, should be developed to identify the kinds of science and technology programs that are appropriate for Federal funding support, and to determine the extent of such support. In particular, projects of inherently large or long-term cost should conform with established criteria.

(3) Federal promotion of science and technology should maximize quality of research, stability of scientific and technological institutions, and, for urgent tasks, timeliness of results, With particular reference to Federal support for basic research, funds should be allocated to encourage education in needed disciplines, to provide a base of scientific knowledge from which future essential technological development can be launched, and to add to the cultural heritage of the Nation.

(4) A uniform patent policy should be promulgated for all Federal agencies, having as its primary objective the full use of beneficial technology to serve the public.

(5) Antitrust regulation to compel competitive economic pluralism should not foreclose cooperation among competing firms in

industrial research and development beneficial to an entire industry and to the public.

(6) A closer inter-relationship should be encouraged among practitioners of different scientific disciplines.

(7) Federal departments, agencies, and instrumentalities should assure efficient management of laboratory facilities and equipment in their custody, including acquisition of effective equipment, liquidation of inferior and obsolete properties, and cross-servicing to maximize the productivity of costly hardware. Disposal policies should include attention to arrangements for further productive use.

(8) The full use of the contributions of science and technology to support State and local government goals should be encouraged.

(9) Formal recognition should be accorded those persons whose scientific and technological achievements have contributed significantly to the national welfare.

(10) The Federal Government should support applied scientific research in proportion to its probability of being useful, insofar as this probability can be determined; but while maximizing the beneficial consequences of technology, the Government must act appropriately to minimize foreseeable injurious consequences.

TITLE II—SCIENTIFIC AND TECHNOLOGICAL ADVICE IN THE EXECUTIVE OFFICE OF THE PRESIDENT

CREATION OF COUNCIL OF ADVISERS

SEC. 201. There is created in the Executive Office of the President a Council of Advisers on Science and Technology (hereinafter in this title referred to as the "Council"). The Council shall be composed of five members who shall be appointed by the President, by and with the advice and consent of the Senate, and serve at the pleasure of the President. Each member shall be exceptionally qualified and distinguished in science, engineering, or closely related fields, or in public administration or affairs, and shall be capable of rendering accurate and comprehensive analysis and critical examination of the programs and activities of the Government in the light of the findings and policies set forth in title I of this Act. The Council shall include members with experience in industry, in academia, and in government. The President shall designate one of the members of the Council as Chairman; and the Chairman shall also serve as a member of the National Security Council.

DUTIES AND FUNCTIONS OF COUNCIL

SEC. 202. It shall be the duty and function of the Council—

(1) to formulate and to submit to the President and to the Congress detailed recommendations on national science and technology policy, priorities, programs, and activities in the light of the findings and policies set forth in title I of this Act;

(2) to submit to the President and the Congress an annual report concerning the status, dispersion, and rate of progress of

scientific and technological knowledge in this country in relation to the present and potential use of such knowledge in specific areas of national concern, and in relation to the status, dispersion, and rate of progress of such knowledge in other countries;

(3) to maintain a liaison with the interagency Federal Council for Science and Technology, with the National Science Board, and with all councils and offices of the Executive Office of the President, and develop a close working relationship with the National Security Council;

(4) to conduct or have conducted long range study, analysis, and planning, in regard to the application of science and technology to major national problems or concerns;

(5) to evaluate the productivity and effectiveness of the scientific and technological research, development, and technological assessment programs of all Federal departments, agencies, and instrumentalities, and to submit such evaluations to the President together with recommendations for remedial action;

(6) to develop, and to periodically review and revise, a set of standards or criteria for determining the optimum level of science and technology research and development effort by the Federal Government, and of Federal support for science and technology research and development activities, in accordance with the policies set forth in sections 102(a)(1) and 102(b)(5) of title I of this Act; and

(7) to undertake such additional duties and functions as the President may direct.

DUTIES AND FUNCTION OF CHAIRMAN

SEC. 203. (a) In addition to his duties and functions under section 202 (and as a member of the National Security Council), the Chairman of the Council shall be available to serve as personal adviser to the President. In this capacity he may—

(1) advise the President with regard to the methodology and operation of specific governmental scientific or technological programs or endeavors;

(2) analyze and examine the relative merits of the scientific and technological alternatives involved in such programs or endeavors;

(3) prepare, or cause to be prepared, and to submit, briefs, memoranda, or other documents or presentations of such scientific, technical, political, or other data as may be useful to the President in making both long-term and short-term or immediate decisions; and

(4) undertake such additional duties and functions as the President may direct.

(b) When called upon to advise the President with respect to a subject or area within the jurisdiction of the Council as specified in section 202 of this title, the Chairman shall consult with the Council prior to rendering such advice, and shall inform the President of the Council's views with respect to such subject or area.

(c) Upon request of the Chairman of the Council, the head of any Federal department, agency, or instrumentality (including the head

of the Department of the Army, Navy, or Air Force) is authorized (1) to furnish to the Chairman such information as may be necessary for carrying out his functions and as may be available to or procurable by such department, agency, or instrumentality, and (2) to detail to temporary duty with the Chairman on a reimbursable basis such personnel within his administrative jurisdiction as he may need or believe to be useful for carrying out his functions. Each such detail shall be without loss of seniority, pay, or other employee status, to civilian employees so detailed, and without loss of status, rank, office, or grade, or of any emolument, perquisite, right, privilege, or benefit incident thereto, to military personnel so detailed. Each such detail shall be pursuant to a cooperative agreement of the Chairman with the head of relevant department, agency, or instrumentality.

STAFFING

SEC. 204. The Chairman is authorized to select, appoint, and employ, and fix the compensation of, such specialists and other experts as may be necessary for the carrying out of the duties and functions of the Council and of the Chairman, without regard to the civil service laws, and is authorized to select, appoint, and employ, subject to the civil service laws, such other officers and employees as may be necessary for carrying out the duties and functions of the Council and of the Chairman.

REORGANIZATIONS

SEC. 205. (a) The President shall from time to time examine the organization of the Council and shall determine what changes, if any, are necessary to reduce expenditures and promote economy and efficiency; and to increase the Council's and the Chairman's capacity to render their analyses, examinations, advice, and counsel, by reduction or increase in the number of members on such Council or by reduction, expansion, or alteration of the duties and functions of the Council or of its Chairman. When the President, after investigation, finds that any of such changes would promote the policies and purposes of this Act, he may prepare a reorganization plan for effecting the change or changes involved, and submit such plan to the Congress, together with his findings and a statement of reasons for the proposed change or changes, and shall have any such reorganization plan delivered to both Houses on the same day and to each House while it is in session.

(b) A provision contained in a reorganization plan shall take effect at the end of the first period of 60 calendar days of continuous session of Congress after such plan is transmitted to it (such days of continuous session to be computed in accordance with section 906(b) of title 5, United States Code) unless, between the date of transmittal and the end of the 60-day period, each House has passed a resolution stating in substance that that House does not favor the reorganization plan. However, no such plan shall take effect unless it is submitted to Congress before January 3, 1980.

(c) The provisions of sections 908 through 913 of title 5, United States Code, shall apply with respect to any reorganization plan transmitted to the Congress pursuant to subsection (a) of this section.

(d) A reorganization plan which is effective shall be printed (1) in the Statutes at Large in the same volume as the public laws, and (2) in the Federal Register.

AUTHORIZATION

SEC. 206. There are authorized to be appropriated for fiscal year 1976 and thereafter such sums as may be necessary to carry out the purposes of this title.

TITLE III—DEPARTMENT OF RESEARCH AND TECHNOLOGY OPERATIONS

ESTABLISHMENT: SECRETARY; DEPUTY SECRETARY

SEC. 301. (a) There is established in the executive branch a department to be known as the Department of Research and Technology Operations (hereinafter in this title referred to as the "Department"). There shall be at the head of the Department a Secretary (hereinafter in this title referred to as the "Secretary"), and a Deputy Secretary, each of whom shall be appointed by the President, by and with the advice and consent of the Senate. The Deputy Secretary shall act for, and exercise the powers of, the Secretary during the absence or disability of the Secretary or in the event of a vacancy in the office of Secretary.

(b) The Secretary shall receive basic pay at the rate provided for level I of the Executive Schedule under section 5312 of title 5, United States Code. The Deputy Secretary shall receive basic pay at the rate provided for level II of the Executive Schedule under section 5313 of such title.

PURPOSE AND FUNCTION

SEC .302. It shall be the purpose and function of the Department—

(1) to provide a centralized administrative resource to certain key agencies and instrumentalities of the Federal Government whose primary mission is scientific or technical research and development, as specified in section 303;

(2) to assist those agencies and instrumentalities in improving the coordination and interaction of their respective current programs and activities;

(3) to serve as the organizational repository for any major new national scientific or technological research or development programs not within the jurisdiction of those key agencies and instrumentalities or of other Federal departments, agencies or instrumentalities;

(4) to promote, in accordance with the provisions of title I, such technology assessment activities as the Secretary determines to be appropriate, and, upon request, to assist all Federal agencies and instrumentalities in the conduct of such assessment activities;

(5) to provide, insofar as is practicable with the resources allocated to it, all Federal departments, agencies, and instrumentalities with such scientific and technical knowledge, information, expertise, research facilities, or management as they may request, such facilities and services to be provided on a reimbursable basis where and to the extent it is practical and reasonable;

(6) to provide to the President and the Congress an annual review of Federal statutes governing the departments, agencies, and instrumentalities charged with conducting scientific and technological research and development (including those administratively located within the Department) for the purpose of proposing the elimination of actually or potentially redundant, obsolescent, or inefficient programs or activities, or of advancing previously neglected or omitted fields or areas of endeavor;

(7) to provide to the President and the Congress an annual review of the administrative regulations of all those Federal departments, agencies, and instrumentalities (including those administratively located within the Department) which, on more than an incidental basis, contract with private organizations for scientific or technical research or development, such review to be for the purpose of proposing the elimination or alteration of those regulations which are redundant, obsolescent, inefficient or inadequate, or for the purpose of proposing additional regulations;

(8) to provide to the Office of Management and Budget an annual review of, and recommendations regarding, the proposed scientific or technical research or development budgets of all Federal departments, agencies, and instrumentalities (including those administratively located within the Department), such review to be provided prior to the inclusion by the Office of such research and development budgets in the Federal budget, and such recommendations to be made only after consultation with the Council of Advisers on Science and Technology.

ORGANIZATIONAL TRANSFER

SEC. 303. (a) The following governmental agencies and instrumentalities shall be administratively located within the Department, subject to the limitations and restrictions specified in subsection (b):

(1) the National Aeronautics and Space Administration;

(2) the Energy Research and Development Administration;

(3) the National Bureau of Standards;

(4) the National Science Foundation;

(5) the National Oceanic and Atmospheric Administration; and

(6) the Science and Technology Information and Utilization Corporation.

(b) Notwithstanding the organizational transfer to the Department of the agencies and instrumentalities named in subsection (a), such agencies and instrumentalities shall, under the general supervision and direction of the Secretary, operate in an independent manner in the conduct of their various programs and activities, subject to the specific limitation on budgetary authority provided under sections 302(8), 304(6), and 306. The basic mission and purpose of each such agency or instrumentality shall not be modified or abridged as a result of its organizational transfer to the Department in any manner other than as specifically provided by this Act.

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(c) The functions, personnel, property, records, and unexpended balances of appropriations, allocations, and other funds employed, used, held, available or to be made available in connection with the functions of the agencies and instrumentalities specified in subsection (a) shall not be transferred to the Secretary, but shall remain in those agencies and instrumentalities.

DUTIES AND FUNCTIONS OF THE SECRETARY

SEC. 304. It shall be the duty and function of the Secretary—

(1) to continuously review the requirements of the agencies and instrumentalities specified in section 303(a) for centralized administrative, clerical, legal, legislative or executive liaison, computer, or other services, and to develop, maintain, and administer such services;

(2) to convene at regular intervals meetings of the chief officers of the agencies and instrumentalities specified in section 303(a), or of representatives selected by those officers, to examine the potential for expanding the interaction and cooperation of those agencies and instrumentalities in pursuing their various objectives, functions, programs, and activities;

(3) to promote and undertake such scientific and technological research and development objectives, functions, programs, and activities, not within the present purview of the agencies and instrumentalities specified in section 303(a), as may be hereafter adopted or created by statute, order, regulation, proclamation, or directive, and placed within his jurisdiction;

(4) to compile, publish, and distribute to other Federal departments, agencies, and instrumentalities such scientific and technical data as becomes available to him, and to provide, in return for the transfer of funds, appropriations, allocations, or other credits, the services of such experts, consultants, research facilities, or contractors as he may employ, manage, or direct;

(5) to direct, manage, and control the production, publication, and submission of the annual reviews described in sections 302(6) and 302(7);

(6) to promulgate, after consultation with the Federal Council of Science and Technology, rules governing the definition of scientific or technological research for development expenditures and the submission for review of proposed scientific or technological research or development budgets of all Federal departments, agencies, and instrumentalities (including those administratively located within the Department), and to direct, manage, and control the production, publication, and submission of the annual review of, and recommendations regarding those budgets as described in section 302(8);

(7) to report annually in writing to the appropriate committee of the Congress on personnel detailed to the Department pursuant to section 305(b), and

(8) to exercise leadership, under the direction of the President, in matters of scientific and technological research, and to undertake such additional duties and functions as the President may

direct in furtherance of the policies, purposes and goals set forth in title I of this Act.

AUTHORITY OF THE SECRETARY

SEC. 305. (a) In addition to the authority contained in section 304, the Secretary is authorized—

(1) to select, appoint, employ, and fix the compensation of such specialists and other experts as may be necessary for the carrying out of his duties and functions, and to select, appoint, and employ, subject to the civil service laws, such other officers and employees as may be necessary for carrying out his duties and functions;

(2) to obtain services as authorized by section 3109 of title 5, but at rates not to exceed $100 per diem for individuals unless otherwise specified in an appropriation Act;

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

(4) to delegate any of his functions, powers, and duties to such officers and employees of the Department as he may designate; to authorize such successive redelegations of such functions, powers, and duties as he may deem desirable; and to make such rules and regulations as may be necessary to carry out such functions, powers, and duties, and to insure the propriety and effectiveness of such delegations and redelegations;

(5) to establish a working capital fund, to be available without fiscal year limitation, for expenses necessary for the maintenance and operation of such centralized administrative services as he shall find desirable in the interest of economy and efficiency in the Department, and for such items as office equipment, supplies, stationery, copying equipment, graphics, office space, central messenger, mail, and telephone and other communications services;

(6) to cause a seal of office to be made for the Department of such device as he shall approve; and judicial notice shall be taken of such seal;

(7) to provide or contract for or maintain the following for employees and their dependents stationed at remote localities:

(A) emergency medical services and supplies;

(B) subsistence supplies; and

(C) lodging, working, messing, and recreational facilities,

such services, supplies, and facilities to be furnished at a price reflecting reasonable value, with the proceeds being credited to the appropriation from which the expenditure was made;

(8) to accept and utilize voluntary and uncompensated services, and accept, hold, administer, and utilize gifts and bequests of real or personal property, for the purpose of aiding or facilitating the work of the Department, such gifts, bequests, and the proceeds thereof to be—

(A) used as nearly as possible in accordance with the terms of the gift or bequest;

(B) considered as gifts or bequests to or for the use of the United States for the purpose of Federal income, estate, and gift taxes;

(C) deposited in the Treasury of the United States in a separate fund, if in the form of money or if reduced to such form by sale, and disbursed upon order of the Secretary; and

(D) upon request of the Secretary, invested or reinvested by the Secretary of the Treasury in securities of the United States or in securities guaranteed as to principal and interest by the United States (the income of such securities being deposited to the credit of such separate fund and disbursed upon order of the Secretary);

(9) to appoint, without regard to the civil service laws and in conformity with the provisions of the Federal Advisory Committee Act (86 Stat. 770), such advisory committees as shall be appropriate for the purpose of consultation with and advice to the Department in the performance of its functions, and to compensate the members of such committees in accordance with the limitations contained in section 7 of such Act, or in regulations promulgated thereunder; and

(10) to enter into contracts for the conduct of scientific or technological research, upon a determination by the Secretary in each case that the contractor is capable of performing such research efficiently and effectively, and to supervise, manage, and review the success of such research.

(b) Upon request of the Secretary, the head of any Federal department, agency, or instrumentality (including the head of the Department of the Army, Navy, or Air Force) is authorized (1) to furnish to the Department such information as may be necessary for carrying out its functions and as may be available to or procurable by such department, agency, or instrumentality, and (2) to detail to temporary duty within the Department on a reimbursable basis such personnel within his administrative jurisdiction as it may need or believe to be useful for carrying out its functions. Each such detail shall be without loss of seniority, pay, or other employee status, to civilian employees so detailed, and without loss of status, rank, office, or grade, or of any emolument, perquisite, right, privilege, or benefit incident thereto, to military personnel so detailed. Each such detail shall be pursuant to a cooperative agreement of the Secretary with the head of the relevant department, agency, or instrumentality.

STATUS OF BUDGET RECOMMENDATIONS

SEC. 306. The Director of the Office of Management and Budget shall take no action on any budget request contrary to a recommendation of the Secretary, made as a result of a review conducted pursuant to sections 302(8) and 304(6), without first providing the Secretary adequate opportunity to present the facts and reasons upon which such recommendation is based. In the event that the Director determines, after such presentation, to take an action contrary to the recommendation of the Secretary, the recommendation of the Secretary, the decision of the Director, and an explanation of that decision prepared by the Director shall be included in the explanatory materials submitted to Congress with such budget request.

AUTHORIZATION

SEC. 307. There are authorized to be appropriated for the fiscal year 1976, and for each succeeding fiscal year, such sums as may be necessary to carry out this title.

TITLE IV—SCIENCE AND TECHNOLOGY INFORMATION AND UTILIZATION CORPORATION

ESTABLISHMENT AND PURPOSE

SEC. 401. (a) There is established in the executive branch of the Government an independent agency to be known as the Science and Technology Information and Utilization Corporation (hereinafter in this title referred to as the "Corporation"). The Corporation shall consist of a Science and Technology Information and Utilization Board and an Executive Director.

(b) The purpose and mission of the Corporation shall be to (1) assure the widest possible dissemination of scientific and technological information to industry, labor, the academic community, State and local governments, and to the public at large, and (2) coordinate, collate, publish, arrange and manage such information so that it is readily available in effective form at the least feasible cost to the user.

SCIENCE AND TECHNOLOGY INFORMATION AND UTILIZATION BOARD

SEC. 402. (a) The Science and Technology Information and Utilization Board (hereinafter in this title referred to as the "Board") shall consist of nine members appointed by the President by and with the advice and consent of the Senate. The members of the Board shall be selected from among the citizens of the United States and shall include three eminent and distinguished persons from each of the fields of government, industry, and academia. Members of the Board shall biannually select one of their number to serve as Chairman.

(b) The term of office of each member of the Board shall be six years; except that (1) any member appointed to fill a vacancy occurring prior to the expiration of the term for which his predecessor was appointed shall be appointed for the remainder of such term; and (2) the terms of office of members first taking office shall begin on the first day on which the appointment of any such member is confirmed by the Senate and shall expire, as designated at the time of their appointment, one from each of the three fields at the end of two years, one from each of the three fields at the end of four years, and one from each of the three fields at the end of six years. No member shall be eligible to serve in excess of two consecutive terms of six years each. Notwithstanding the preceding provisions of this subsection, a member whose term has expired may serve until his successor has qualified. Any vacancy in the Board shall not affect its power, but shall be filled in the manner in which the original appointment was made.

(c) The members of the Board shall, while attending meetings of the Board or while engaged in duties related to such meetings or in other activities of the Board pursuant to this Act, be entitled to compensation at the rate of $100 per day including traveltime, and while away from their homes or regular places of business they may be allowed travel expenses, including per diem in lieu of subsistence, equal to that authorized by law (5 U.S.C. 5703) for persons in the Government service employed intermittently.

(d) The Board shall meet at least once every other month and shall provide counsel, advice, and direction to the Executive Director in matters of policy, long-term goals, and such other matters as the Executive Director may bring to their attention. The Board members shall seek to promote the interaction and cooperation of the Corporation with industry, business, academia, and other branches and levels of Government, shall review the budget recommendations of the Executive Director, and shall perform such other duties and functions as the President may direct.

EXECUTIVE DIRECTOR OF THE CORPORATION

SEC. 403. (a) The Executive Director shall be appointed by the President, after consideration of such suggestions as the Board may make, by and with the advice and consent of the Senate, and shall serve at the pleasure of the President.

(b) The Director shall receive compensation at the rate provided for level III of the Executive Schedule in section 5314 of title 5, United States Code.

(c) The Executive Director is authorized to appoint a Deputy Director, who shall receive compensation at the rate provided for level V of the Executive Schedule in section 5316 of title 5, United States Code.

CORPORATION POWERS AND FUNCTIONS

SEC. 404. The Corporation is authorized and directed, through its Executive Director—

(1) to select, appoint, and employ, subject to the civil service laws, not to exceed twenty staff members, including clerical staff;

(2) to oversee, manage, direct, and coordinate the operations of the entities transferred to the Corporation by section 405;

(3) to review the operations, functions, programs, activities, budgets, personnel, and organizational structures of those entities, and to recommend to the President such alteration, amendment, consolidation, expansion, or elimination of the programs, activities,, functions, powers or duties of those entities, by statute or otherwise, as will promote the efficiency and effectiveness of those entities and of the Corporation;

(4) to formulate a compatible and comprehensive system or systems for processing, storing, communicating, distributing, and disseminating scientific and technical data, information, theories, and experimental methods and results, which system or systems shall, upon approval by the President, be uniformly adopted and utilized throughout the executive branch of the Government;

(5) to promote and establish intensive and extensive interaction between the Corporation and appropriate industrial, business, academic, and governmental organizations in order to develop more efficient and orderly processes of dissemination and utilization of scientific and technical data, information, theories, and experimental methods and results;

(6) to promote and establish an ongoing and effective liaison with the National Referral Center for Science and Technology of the Library of Congress, and to recommend to the President such measures as will increase and improve the interaction and cooperation of the Corporation with such Center, where and to the extent feasible;

(7) to engage in specific programs of dissemination of information in order to accelerate and promote the utilization of important scientific or technical advances in areas of national economic, social, or political concern or crisis;

(8) to develop channels of communication with State and local governments, other Federal agencies, and private institutions, for use in conjunction with such specific dissemination programs;

(9) to contract with private persons for such services, supplies, data, equipment, and other assistance as it may require in the performance of any of the programs or activities specified by this section; and

(10) to perform such other duties and functions as the President may direct.

TRANSFER OF FUNCTIONS

SEC. 405. (a) The following entities are hereby transferred to the Corporation:

(1) the National Technical Information Service of the Department of Commerce;

(2) the Science Information Exchange, Incorporated, of the Smithsonian Institution;

(3) the Office of Science Information Service of the National Science Foundation; and

(4) the Science Information Council of the National Science Foundation.

(b) There are hereby transferred to and vested in the Executive Director all the functions, powers, and duties—

(1) of the Secretary of Commerce under the Act of September 9, 1950, as amended;

(2) of the Secretary of the Smithsonian Institution with respect to the Smithsonian Science Information Exchange, Incorporated, a wholly controlled nonprofit corporation; and

(3) of the National Science Foundation under sections 901 through 904 of the National Defense Education Act of 1958 (42 U.S.C. 1876–1879).

(c) The personnel, assets, liabilities, contracts, property, and records of, and unexpended balances of appropriations, authorizations, and allocations to and other funds employed, held, or used by, arising from, available to, or to be made available to, the entities specified in subsection (a) of this section as a consequence of their inclusion in, or interaction with, the Department of Commerce, the Smithsonian Institution, or the National Science Foundation, are hereby transferred

to the Corporation. The Executive Director shall assign such personnel, assests, liabilities, contracts, property, records, balances, and funds to the entity from which it was transferred, for use in carrying out the functions, duties, and powers vested by this section in the Corporation and the Executive Director, where and to the extent feasible.

(d) The Secretary of the Smithsonian Institution shall take all actions within his power as are necessary to attain the purposes of this section with regard to the transfer of the Smithsonian Science Information Exchange, Incorporated, including negotiation or direction of amendment of the articles of incorporation, bylaws, contracts, and other instruments.

AUTHORIZATION

SEC. 406. There are authorized to be appropriated for fiscal year 1976, and for each succeeding fiscal year, such sums as may be necessary to carry out this title.

TITLE V—MISCELLANEOUS AND TECHNICAL

SEC. 501. The National Science Foundation Act of 1950 (42 U.S.C. 1861 et seq.) is amended—

(1) by inserting after "Director" in section 2 the following: "and shall be administratively located in the Department of Research and Technology Operations, as provided in the National Science Policy and Organization Act of 1975"; and

(2) by striking out subsection 4(g) and by redesignating subsections 4(h), (i), and (j) as subsections 4(g), (h), and (i), respectively.

SEC. 502. Section 902 of the National Defense Education Act of 1958 (42 U.S.C. 1877 is amended—

(1) by inserting after "Department of Agriculture library" in subsection (a) the following: "the director of the National Technical Information Service, the president of the Smithsonian Science Information Exchange, Incorporated;"

(2) by striking out "appointed by the Director of the National Science Foundation" in subsection (a) and inserting in lieu thereof "appointed by the Chairmen of the Board of the Science and Technology Information and Utilization Corporation";

(3) by striking out "the head of the Science Information Service" in subsection (b) and inserting in lieu thereof "the Board of the Science and Technology Information and Utilization Corporation"; and

(4) by striking out "the National Science Foundation" in subsection (c) and inserting in lieu thereof "the Chairman of the Board of the Science and Technology Information and Utilization Corporation".

SEC. 503. Section 2 of Reorganization Plan No. 1 of 1973, transmitted to the Senate and House of Representatives in Congress assembled, January 26, 1973, pursuant to the provisions of chapter 9 of title 5 of the United States Code, is repealed.

SEC. 504. Section 202(a) of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2472(a)) is amended by inserting after "(here-

inafter called the 'Administration')" the following: "which shall be administratively located in the Department of Research and Technology Operations, as provided in the National Science Policy and Organization Act of 1975".

SEC. 505. (a) The Act of March 3, 1901 (15 U.S.C. 271 et seq.) is amended—

(1) by striking out "Secretary of Commerce" in sections 2 and 16 and inserting in lieu thereof "Director of the National Bureau of Standards";

(2) by striking out "referred to as the 'Secretary' " in sections 2 and 16, and inserting in lieu thereof "referred to as the 'Director' ";

(3) by striking out "in this section, Secretary is authorized" in section 2 and inserting in lieu thereof "in this section, Director is authorized";

(4) by striking out "Secretary of Commerce" in section 5 and inserting in lieu thereof "Secretary of Research and Technology Operations";

(5) by striking out "Secretary of Commerce" wherever it appears in sections 6, 9, 10, and 13 through 15, and inserting in lieu thereof "Director";

(6) by striking out "Secretary" wherever it appears in sections 7 and 17 and inserting in lieu thereof "Director"; and

(7) by striking out "Department of Commerce" in sections 8 and 12 and inserting in lieu thereof "National Bureau of Standards".

(b) The Act of March 4, 1911 (15 U.S.C. 279), is amended by striking out "Secretary of Commerce" in section 1 and inserting in lieu thereof "Secretary of Research and Technology Operations".

(c) Section 1 of the Act of May 14, 1930 (15 U.S.C. 282), is amended by striking out "of the Department of Commerce".

SEC. 506. Section 101 of the National Security Act of 1947 (50 U.S.C. 402) is amended by redesignating paragraphs (5), (6), and (7) as paragraphs (6), (7), and (8), respectively, and inserting after paragraph (4) the following:

"(5) the Chairman of the Council of Advisers on Science and Technology;".

SEC. 507. The Chairman of the Council of Advisers on Science and Technology, the Secretary of the Department of Research and Technology Operations, and the Executive Director of the Science and Technology Information and Utilization Corporation, shall, within six months of the date of enactment of this Act, each submit to the President for prompt transmission to the Congress, draft legislation of such technical and conforming amendments as may be necessary to reflect the organizational and substantive changes sought to be effected by this Act with regard to their respective organizations or jurisdictions, including any provisions which may be necessary to assure an orderly transition from existing programs or organizations to the new or modified programs or organizations established by this Act.

48-694—75——5

SECTION-BY-SECTION ANALYSIS OF H.R. 4461, "NATIONAL SCIENCE POLICY AND ORGANIZATION ACT OF 1975"

SEC. 1. Short Title; Table of Contents.

TITLE I—NATIONAL SCIENCE POLICY

SEC. 101. (*a*) 1. Finding of Congress that national goals (economic, security, resource use, functioning of Government and society) require employment of science and technology;

2. Knowledge about the relationship of science and technology to national and international events is essential to national decisionmaking.

(*b*) Goals for science and technology include:

1. Demonstrating world leadership in science and technology;

2. Efficient use of resources for economic opportunity, stability, and appropriate growth;

3. National security;

4. Environmental, cultural, and social amenities; and

5. Wide availability of the fruits of science and technology.

SEC. 102. (*a*) Declaration of Policy; A national science policy comprises the following principles:

1. Continuing formulation of a national strategy;

2. Economic growth balanced against preservation of benign environment;

3. Balancing U.S. domestic and diplomatic objectives in an interdependent world;

4. Education and training in science and technology; and

5. Wide dissemination of scientific and technological information.

(*b*) Implementation of Declared Policy requires:

1. A focal center in the executive branch for coordination of Government agency science and technology programs and to advise the Chief Executive;

2. Government shall ensure transfer of technology information to users, and facilitate close coupling of industry with academia in the application of scientific findings;

3. Useful but non-commercial technologies sought;

4. Cooperative scientific and technological relationships with States, local governments, and the private sector;

5. Determination of proper level of effort in science and technology;

6. Rational allocation of resources toward present and future goals; and

7. Regular and systematic information to the Congress about the condition of the national scientific and technological effort and its resources.

(c) Implementation of Declared Policy requires such procedures as—

1. The functional use of Federal procurement policy;
2. Explicit criteria for projects in science and technology warranting Federal support;
3. Such criteria to include quality of research, stability of institutions, timeliness of results, educational encouragement, and cultural advance;
4. A uniform Federal agency patent policy;
5. A balance between cooperation and competition in research and development by private industry under antitrust regulation;
6. Closer relationships among scientific disciplines;
7. Efficiency in the management of Federal laboratories;
8. The use of science and technology to support State and local government goals;
9. Formal recognition of important scientific and technological contributions to public welfare; and
10. Support for useful science and avoidance of injurious consequences of technological applications.

TITLE II—SCIENTIFIC AND TECHNOLOGICAL ADVICE IN THE EXECUTIVE OFFICE OF THE PRESIDENT

SEC. 201. Creation of Council of Advisers on Science and Technology, of five members, President to designate Council Chairman, who will serve as member of the National Security Council.

SEC. 202. Duties and functions of the Council:

1. Provide to the President and Congress detailed recommendations on national science and technology policy, priorities, programs, and activities;
2. Report annually on the status of U.S. science and technology;
3. Maintain liaison with policymaking units within the Executive Office of the President, and with science coordination groups in the executive branch;
4. Ensure the conduct of long range planning of the use of science and technology on major national issues;
5. Evaluate effectiveness of research and development, and assessment of technology, by Federal instrumentalities and recommend appropriate remedial action;
6. Establish criteria for determining proper level of Federal conduct and support of science and technology; and
7. Such other functions as the President may direct.

SEC. 203. Duties and function of Council Chairman:

(a) Chairman to be available to serve as personal science adviser to the President, on—

1. Conduct of Federal scientific and technological programs;
2. Relative merits of alternative approaches in such programs;
3. Technical documentation useful in deciding issues at the Presidential level; and
4. Other duties as directed.

(b) Chairman to consult with the Council before rendering advice

within its jurisdiction, and inform the President of the Council's views.

(c) Government agencies authorized to furnish information and detail personnel to the Chairman of the Council.

SEC. 204. Staffing authorization for the Chairman of the Council.

SEC. 205. (a) The President is authorized to reorganize the Council, as needed, to promote the policies and purposes of this Act.

(b) Such reorganization plans to be effective in 60 days unless both Houses of Congress enact disapproving resolutions; plans to be submitted before January 3, 1980.

(c) and (d) Technical provisions.

SEC. 206. Funding authorization.

TITLE III—DEPARTMENT OF RESEARCH AND TECHNOLOGY OPERATIONS

SEC. 301. (a) Establishment of Department of Research and Technology Operations, headed by a Secretary and a Deputy Secretary.

(b) At level I and level II, respectively, as per Title V, U.S. Code.

SEC. 302. Purpose and function of the Department are:

1. Centralized administrative resource to specified Federal agencies with primary mission in research and development;
2. To assist these agencies in program coordination and interaction;
3. To be assigned new major programs external to existing Federal agency jurisdictions;
4. To conduct and support the conduct of executive branch operations in technology assessment;
5. To provide technical assistance and facilities to other Federal agencies on request, on reimbursable basis;
6. To report annually to the President and Congress on the status of statutory R&D program, plus the need to eliminate, augment or create new ones, as appropriate.
7. To report annually to the President and Congress on R&D regulations issued by Federal agencies contracting for research with private organizations; and
8. In consultation with the Council of Advisers of Science and Technology, to report to the Office of Management and Budget an annual review of proposed budgets for research and development of all Federal agencies.

SEC. 303. (a) Transfers to the new Department the following Federal agencies:

1. National Aeronautics and Space Administration;
2. Energy Research and Development Administration;
3. National Bureau of Standards;
4. National Science Foundation;
5. National Oceanic and Atmospheric Administration; and
6. Science and Technology Information and Utilization Corporation, as set forth in Title IV, below.

(b) Basic missions of transferred agencies to be unchanged; they would operate independently, subject to specific limitations on budget authority and subject to the general supervision and direction of the Secretary.

(c) Functions, personnel, and properties of the transferred agencies to remain under their jurisdiction.

SEC. 304. Duties and functions of the Secretary are:

1. Review, develop, maintain, and administer appropriate centralized services for the transferred agencies;

2. Consult regularly with representatives of the transferred agencies to expand their mutual cooperation and interaction;

3. Pursue other technical activities placed within his jurisdiction;

4. Disseminate scientific and technical data and assistance to other Federal agencies;

5. Publish reports of annual reviews pursuant to Sec. 302, items (6) and (7);

6. Promulgate, after consultation with the Federal Council for Science and Technology, rules for definitions of research and development expenditures for statistical and budgeting purposes;

7. Report annually to appropriate committees of Congress on personnel detailed to the Department from other agencies; and

8. Exercise leadership in scientific research and other duties as the President may direct in furtherance of matters in Title I of this Act.

SEC. 305. (*a*) The Secretary is also authorized—

1. To employ specialists and others;
2. To obtain consulting services;
3. To provide for personnel detailed from other agencies;
4. To delegate, make regulations, and monitor performance;
5. Establish a revolving fund for administrative services;
6. Seal of office;
7. Amenities for remote employees and dependents;
8. Accept donations and use them for purposes of the Act;
9. Appoint, consult, and compensate advisory committees; and
10. Contract for research.

(b) Federal agencies authorized to furnish information and, on a reimbursable basis, to detail personnel to the Department pursuant to cooperative agreement.

SEC. 306. No contrary action to be taken by the Director of OMB on R & D budgets recommended by the Secretary without prior consultation; if contrary action is sustained after such consultation, the details of the proceedings to be included in explanatory materials submitted to the Congress with such budget request.

SEC. 307. Appropriation authorization.

TITLE IV—SCIENCE AND TECHNOLOGY INFORMATION AND UTILIZATION CORPORATION

SEC. 401. Establishment and purpose: Creation of the Science and Technology Information and Utilization Corporation, with a Board and Executive Director; its purposes to be:

1. To assure widest possible dissemination of scientific and technological information; and

2. Coordinate, collate, publish, arrange, and manage such information so that it is readily available in effective form at least feasible cost to the user.

SEC. 402. Creates a nine-member Board, three each from fields of government, industry and academia, of eminent and distinguished persons; Board Chairman to be selected biennially by the Board; terms of office of members to be six years (initially staggered). Service limited to two consecutive terms. Compensation, travel, and per diem provisions. Bimonthly meetings to advise Executive Director on policy, goals, and other matters; Board members to promote interaction and cooperation of the Corporation with industry, academia, business, and other branches and levels of Government, review the Executive Director's budget, and perform other duties and functions as the President may direct.

SEC. 403. Appointment and compensation of the Executive Director (level III of Executive Schedule), and of Deputy Director (level V).

SEC. 404. The Corporation's powers and functions, administered through its Executive Director, to include—

1. Staffing;

2. Direction of operations of entities transferred to the Corporation pursuant to Sec. 405;

3. Review all aspects of such entities and recommend changes to the President to promote their efficiency and effectiveness;

4. Formulate system or systems for management of technical information, and upon approval by the President, such system or systems shall be uniformly adopted and utilized throughout the executive branch;

5. To promote more efficient and orderly processes of dissemination and use of technical information, maintain close interaction with appropriate industrial, business, academic, and Government organizations;

6. Maintain liaison with the National Referral Center for Science and Technology of the Library of Congress, and recommend to the President measures to improve cooperation of the Corporation with the Center;

7. Undertake specific information dissemination programs in areas of national economic, social, or political concern or crisis;

8. Develop channels of communication with State and local governments, other Federal agencies, and private institutions in conjunction with such specific dissemination programs;

9. Contract for personal services, supplies, data, equipment, and other assistance; and

10. Perform such other functions as the President may direct.

SEC. 405. (a) The following entities transferred to the Corporation:

1. National Technical Information Service of the Department of Commerce;

2. The Science Information Exchange, Inc., of the Smithsonian Institution;

3. The Office of Science Information Service of the National Science Foundation;

4. The Science Information Council of the National Science Foundation.

(*b*) Implementing technical provisions for the above transfers.

SEC. 406. Appropriation authorization.

CHRONOLOGY OF FEDERAL EXECUTIVE BRANCH SCIENCE ORGANIZATION: 1787–1975 [1]

The following chronology, predominantly legislative action, traces the evolution of Federal concern in organizing to deal with problems relating to scientific and technical matters. While some of these actions may be looked upon as having a specialized application, the preponderance of them addressed problems of truly national scope, many as pressing as the problems the Nation faces today on the threshold of its third century.

1787: The Constitutional Convention considered scientific and technical matters to be included in the Constitution. Among the ideas discussed were the establishment of national seminaries and universities for the promotion of literature, the arts, and the sciences; charters of incorporation for national societies and institutions dedicated to the advancement of knowledge; and the establishment of public institutions, rewards, and subsidies to promote agriculture, commerce, and the advancement of useful knowledge and discovery.

1787: Science in the Constitution. The only specific reference to "science" in the Constitution is in Article I, Section 8: "The Congress shall have Power * * * To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries".

April 10, 1790: First patent act passed at request of President Washington. Secretaries of state, war and the attorney general constituted a board to pass on inventions. Keeping records made responsibility of Secretary of State. (Act of April 10, 1790; 1 Stat. 109)

April 2, 1792: The United States Mint was established by Congress. (Act of April 2, 1792; 1 Stat. 246)

February 18, 1793: New patent act put Secretary of State in charge of patents. (1 Stat. 318)

July 16, 1798: Provision of medical care for merchant seamen by the Federal Government was authorized by Congress. Treasury Department was given administrative responsibility. The first marine hospital constructed with Federal funds was completed in 1800.

The U.S. Public Health Service traces its beginning to these hospitals. (1 Stat. 605)

April 24, 1800: Library of Congress was established by law approved April 24, 1800. (2 Stat. 56)

February 10, 1807: Coast Survey established under administrative direction of the Secretary of the Treasury by Act of Congress. (Act of February 10, 1807; 2 Stat. 413)

[1] This chronology appeared initially in House Document 91–172, Centralization of Federal Science Activities, report to the Subcommittee on Science, Research, and Development of the House Committee on Science and Astronautics, by the Science Policy Research Division, Congressional Research Service. 91st Cong., 1st sess. Washington, U.S. Govt. Print. Off., 1969. 108 p. At pp. 37–50. The chronology has been updated to include both key legislative and executive branch actions in the past decade.

February 19, 1818: Surgeon General's Office and the Army Medical Department established with authority to prevent and treat disease and to collect weather data for processing and analysis. (3 Stat. 408)

1830: Secretary of the Navy established a Depot of Charts and Instruments, which later evolved into the Naval Observatory.

June 14, 1836: Secretary of the Treasury was directed to cause a complete set of all the weights and measures adopted as standards to be delivered to the governor of each State for the use of the States. (Resolution No. 7; 5 Stat. 133)

July 4, 1836: Permanent office of commissioner of patents created. (Act of July 4, 1836; 5 Stat. 117)

August 31, 1842: By act of Congress a sum of $25,000 was authorized for a building for the Navy Depot of Charts and Instruments, later the Naval Observatory.

August 10, 1846: The Smithsonian Institution was chartered by Congress. Initial endowment came from gift of $500,000 from James Smithson in 1829. (9 Stat. 103)

March 3, 1849: Department of the Interior was established, taking over the General Land Office from the Treasury Department, the Office of Indian Affairs from the War Department, and the Pension Office and the Patent Office, which had been independent offices. (9 Stat. 395)

May 15, 1862: U.S. Department of Agriculture established. Among its missions was the systematic application of scientific methods to agriculture. The department was elevated to Cabinet status in 1889. (12 Stat. 387, ch. 72)

July 2, 1862: Morrill Act or Land Grant College Act passed providing for establishment in each state of at least one college to provide instruction in agriculture and the mechanic arts. The significance of the act was that it formally recognized the national need for trained manpower in selected fields, and established mechanisms for cooperative Federal and state government participation in financing academic activities related to science and research interests. (12 Stat. 503)

March 3, 1863: National Academy of Sciences was established by Congressional charter. (12 Stat. 806)

March 2, 1867: Office of Education was established. (14 Stat. 434)

1869: Office of Education became a part of the Department of the Interior.

July 8, 1870: Further general revision of the patent laws. (16 Stat. 198)

December 18, 1884: Joint resolution extending the time fixed for the joint commission (Allison Commission) appointed under the sundry civil act approved July 7, 1884, to consider present organizations of Signal Service, Geological Survey, Coast and Geodetic Survey, and Hydrographic Office of the Navy Department to secure greater efficiency and economy, to submit their report. (Joint resolution No. 1, 23 Stat. 515)

June 20, 1878: Coast Survey redesignated Coast and Geodetic Survey (20 Stat. 206, 215)

March 2, 1887: Hatch Act of 1887 further encouraged scientific agriculture by providing for agricultural experiment stations in the land-grant colleges. (24 Stat. 440)

October 1, 1890: Weather Bureau established within the Department of Agriculture. (26 Stat. 653)

March 2, 1901: Appropriations for the Department of Agriculture for fiscal year 1902 made separate appropriations for the Bureau of Chemistry, Bureau of Plant Industry, and Bureau of Soils, thereby establishing them as separate and independent bureaus. (31 Stat. 922)

March 3, 1901: National Bureau of Standards established in Department of the Treasury, replacing the Office of Construction of Standard Weights and Measures. The new bureau was given full powers over custody, preparation, and testing of standards and responsibilities for "the solution of problems which arise in connection with standards * * *" In addition to service to Federal, state and municipal governments, the bureau was to provide for a fee standards for nongovernmental units or individuals.

The legislation was an indication of the renewed willingness and ability of Congress to provide an administrative means of dealing with government science needs. [On February 14, 1903 the bureau became part of the new Department of Commerce and Labor. Public Law 87; 32 Stat. 825] (31 Stat. 1449)

March 6, 1902: Bureau of the Census was established in the Department of the Interior, giving permanency to an organization for the census in preference to the previous temporary organizations set up every ten years and subsequently allowed to lapse. (Public Law 27; 32 Stat. 51)

July 1, 1902: A bill to increase the efficiency and change the name of the Marine Hospital Service to Public Health and Marine Hospital Service was enacted. The law authorized the establishment of specified administrative divisions, and, for the first time, designated a bureau of the Federal Government as an agency in which public health matters could be coordinated. (32 Stat. L. 712)

January 12, 1903: Secretary of the Interior was directed to transfer all census records and volumes to the Census Office. (Public Law 20; 32 Stat. 767) [Census office was transferred to Department of Commerce and Labor by act of February 14, 1903.]

February 14, 1903: Department of Commerce and Labor created by act of Congress. Section 12 authorized the President to transfer to the new department at any time all or part of any unit engaged in "statistical or scientific work" from the Departments of State, Treasury, War, Justice, Post Office, Navy, and Interior. (Public Law 87; 32 Stat. 825)

1903: A Committee on Organization of Scientific Work was appointed by President Theodore Roosevelt to consider the central organization of government scientific bureaus with primary emphasis on eliminating duplication. During the four months of its existence the Committee prepared a series of reports on individual government bureaus.

April 28, 1904: An act to incorporate the Carnegie Institution of Washington. The objects of the corporation "shall be to encourage * * * investigation, research, and discovery, and the application of knowledge to the improvement of mankind." (Public Law 260; 33 Stat. 575)

February 1, 1905: Transfer of forest reserves from Department of the Interior to Department of Agriculture; change of name of Division of Forestry to Forest Service. (Public Law 34; 33 Stat. 628)

March 16, 1906: The Adams Act of 1906 strengthened both financial support for agricultural experiment stations and their control by the Federal government, increasing annual funding but also restricting use of funds to "conducting original researches or experiments bearing directly on the agricultural industry of the United States." (Public Law 47; 34 Stat. 63)

April 23, 1908: A reorganization of the Medical Department of the U.S. Army providing for a Medical Corps and Medical Reserve Corps as well as the existing Hospital corps, nurse corps and dental surgeons. (Public Law 101; 35 Stat. 66)

May 16, 1910: Bureau of Mines established in the Department of the Interior. The principal duties of the bureau related to ways to improve conditions and safety in mines.

Functions authorized to be transferred from the U.S. Geological Survey related to investigations of structural materials, analyses of fuel substances (coal, lignites and other mineral fuels), and investigation of causes of mine explosions. (Public Law 179; 36 Stat. 369)

August 14, 1912: Under an act, the name Public Health and Marine Hospital Service was changed to Public Health Service. The legislation also authorized the Public Health Service to conduct field investigations and studies and, in particular, investigations of the diseases of man and pollution of navigable streams. The significance of this legislation was that by opening the whole field of public health to research by the government, it was recognized as a legitimate area of Federal activity. (Public Law 265; 37 Stat. 309)

February 25, 1913: By a new organic act the field of the Bureau of Mines was expanded by definition to include "mining, metallurgy, and mineral technology," thus extending the activities beyond the coal industry and for prevention of waste as well as mine safety. (Public Law 386; 37 Stat. 681)

March 4, 1913: Department of Commerce and Labor separated by act of Congress which created a new Department of Labor. (Public Law 426; 37 Stat. 736)

May 8, 1914: The Smith-Lever Act provided for cooperative agricultural extension work between the agricultural colleges receiving benefits under the Act of July 2, 1862 (the Morrill Act). Cooperative agricultural extension work (home and field demonstration) was also authorized for people not in the colleges. By this act the Extension Service of the Department of Agriculture was put on a separate and permanent basis. (Public Law 95; 38 Stat. 372)

March 3, 1915: The Advisory Committee for Aeronautics (later the National Advisory Committee for Aeronautics, or NACA) was established by a rider to the Naval Appropriations Act, "* * * to supervise and direct the scientific study of the problems of flight, with a view of their practical solution." The sum of $5,000 a year was appropriated for 5 years. The total appropriation for naval aeronautics was $1 million. NACA was the first war research agency of the World War I period. (Public Law 271; 38 Stat. 928)

July 1915. A Naval Consulting Board with Thomas A. Edison, chairman, was appointed by Navy Secretary Josephus Daniels. The Board whose membership was selected from the eleven largest engineering societies in the U.S. was intended to serve as a review and evaluation board for ideas and suggestions which might be developed for defense purposes.

1916: A National Research Council of the National Academy of Sciences was established to permit a larger part of the scientific community to assist in research in connection with national preparedness. Approval of the Council by a letter of July 25, 1916 from President Woodrow Wilson to the President of the NAS was formalized by the issuance of Executive Order 2859 of May 11, 1918.

August 25, 1916: National Park Service was established in the Department of Interior. National parks, monuments and reservations were placed under the supervision of the director who was responsible to the Secretary. (Public Law 235; 39 Stat. 535)

February 23, 1917: Smith-Hughes Act created a Federal Board of Vocational Education for promotion of vocational education in cooperation with the states. Appropriated funds for the training and salaries of teachers of trade, home economics, and industrial subjects. (Public Law 347; 39 Stat. 929)

October 1, 1917: Congress created the Aircraft Board to expand and coordinate the industrial activities relating to aircraft and to facilitate generally the development of air service. (Public Law 48; 40 Stat. 296)

October 27, 1918: A joint resolution establishing a Reserve Corps for the Public Health Service was passed. The 1918 influenza epidemic emphasized the need for a reserve corps in the Service to meet such emergency situations. (Public Resolution 45; 40 Stat. 1017)

June 10, 1920: Federal Power Commission was created to provide for the improvement of navigation, the development of water power, and use of public lands in relation thereto. The Commission was authorized to make investigations and collect data on the utilization of water resources, and on the water power industry. (Public Law 280: 41 Stat. 1063). (Amended to prohibit power projects in national parks or monuments unless specifically authorized by Congress; Public Law 369, March 3, 1921; 41 Stat. 1353)

June 10, 1921: Budget and Accounting Act, 1921. Established the Bureau of the Budget, provided for the annual submission of a consolidated Federal budget, and established a General Accounting Office. Henceforth, all Federal agency fund requests including research would have to receive central approval prior to transmission to Congress. (Public Law 13; 42 Stat. 20)

May 11, 1922: The appropriations act of the Department of Agriculture for fiscal year 1923 authorized the creation of the Bureau of Agricultural Economics out of miscellaneous already existing statistical and analytical activities. This has ben cited as an example of the type of new social-science agencies which were created during the 1920's. (Public Law 217; 42 Stat. 531)

February 26, 1923: Bureau of Home Economics established in the Department of Agriculture by appropriations act for the department for fiscal year 1924. (Public Law 446; 42 Stat. 1315)

1923: Naval Research Laboratory was established. Its legislative basis goes back to initial sums appropriated in 1916 for a laboratory for the Naval Consulting Board.

February 24, 1925: The Purnell Act authorized additional funds to be appropriated for each agricultural experiment station for fiscal years 1926 and thereafter according to a graduated scale. Funds were to be used for necessary expenses of investigations relating to agricultural products including scientific researches on the "establishment and maintenance of a permanent and efficient agricultural industry." (Public Law 458; 43 Stat. 970)

April 13, 1926: An act amending the Morrill Act of 1862 to provide for investment of proceeds from public land sales, the establishment of a perpetual fund, and use of interest from the fund to be applied toward endowment or maintenance of colleges specializing in agriculture and mechanics, "without excluding other scientific and classical studies." (Public Law 113; 44 Stat. 247)

May 20, 1926: Air Commerce Act, 1926. This was the first Federal legislation regulating civil aeronautics. Gave the Department of Commerce wide powers over aviation. Research and development to improve air navigation facilities was specifically mentioned among the ways in which Congress directed the Secretary of Commerce to foster air commerce. He was also directed to make recommendations to the Secretary of Agriculture concerning necessary meteorological service. (Public Law 254; 44 Stat. 568)

February 23, 1927: Radio Act of 1927. Created a Federal Radio Commission to be responsible for the regulation and control of radio transmission within the United States and of channels of interstate and foreign radio transmission. (Public Law 632; 44 Stat. 1162)

March 2, 1927: Amendments to the patent laws. Provided that examiners in chief shall have competent legal or scientific ability. Amended the appeals procedure. (Public Law 690; 44 Stat. 1335)

March 10, 1928: Authorized $900,000 to complete transfer of experimental and testing plant of Air Corps to a permanent site at Wright Field, Dayton, Ohio and for construction and installation of technical buildings. (Public Law 150; 45 Stat. 299)

April 30, 1928: Amendment to patent laws permitting issuing of patents to Government employees without fee when the invention is certified to be in the public interest. Inventions so patented must be made available for Government manufacture or use without payment of royalty. (Public Law 325; 45 Stat. 467)

May 22, 1928: Further amendment to Morrill Act of 1862 to authorize additional appropriations for cooperative extension work in agriculture and home economics. (Public Law 475; 45 Stat. 711)

January 19, 1929: The Narcotics Control Act provided for construction of two hospitals for the care and treatment of drug addicts, and authorized creation of a Narcotics Division in the Office of the Surgeon General of the Public Health Service. (Public Law 70–672; 45 Stat. L. 1085)

February 23, 1929: Benefits of the Hatch Act and the Smith-Lever Act relating to cooperative extension work between agricultural colleges were extended to the Territory of Alaska. (Public Law 797; 45 Stat. 1256)

March 2, 1929: Membership of the National Advisory Committee for Aeronautics increased from 12 to 15 members by act of Congress. (Public Law 908; 45 Stat. 1451)

April 9, 1930: The act provided for detail of Public Health Officers or employees to other departments or agencies to cooperate in public health activities. The act also changed the name of the advisory board for the Hygienic Laboratory to the National Advisory Council. (Public Law 106; 46 Stat. 150)

May 14, 1930: An act to authorize the establishment of a national hydraulic laboratory in the Bureau of Standards. (Public Law 219; 46 Stat. 327)

May 23, 1930: An act to provide for plant patents. (Public Law 245; 46 Stat. 376)

May 26, 1930: The Randsell Act reorganized, expanded, and redesignated the Hygienic Laboratory as the National Institute of Health. The act authorized $750,000 for the construction of two buildings for NIH and authorized the establishment of a system of fellowships. (Public Law 71–251; 46 Stat. L. 379)

June 11, 1930: An act to provide for the modernization of the U.S. Naval Observatory at Washington, D.C. (Public Law 343; 46 Stat. 556)

June 14, 1930: A law authorized creation of a separate Bureau of Narcotics in the Treasury Department to control trading in and use of narcotic drugs for thereapeutic purposes. Also, the legislation changed the name of the Narcotics Division of the Public Health Service to the Division of Mental Hygiene, and gave the Surgeon General authority to investigate the causes, treatment, and prevention of mental and nervous diseases. (Public Law 71–357; 46 Stat. L. 585)

February 20, 1931: An act to authorize the Secretary of Commerce to purchase land and to construct buildings and facilities for radio research investigations. (Public Law 700; 46 Stat. 1196)

March 4, 1931: The Director of the Census was directed to collect and publish crime statistics. (Public Law 837; 46 Stat. 1517)

May 18, 1933: Tennessee Valley Authority Act of 1933. Created a Tennessee Valley Authority (TVA) to maintain and operate a power plant at Muscle Shoals, Alabama. Other objectives of the act were to improve navigability on and provide for flood control of the Tennessee River, to improve surrounding lands and provide for agricultural and industrial development of the Tennessee Valley. (Public Law 17; 48 Stat. 58)

July 31, 1933: Science Advisory Board under the National Research Council was created by President Roosevelt by Executive Order 6238. The Executive Order authorized the Board, acting through the machinery and under the

jurisdiction of the NAS–NRC, "to appoint committees to deal with specific problems in the various departments."

June 19, 1934: Communications Act of 1934. Created a Federal Communications Commission to regulate interstate and foreign commerce communication by wire or radio. Title III provided for licenses for radio communication. The Act also gave the President war emergency power to direct communications. (Public Law 416; 48 Stat. 1064)

June 30, 1934: National Resources Board established by Executive Order 6777. The Board was later designated the National Resources Committee (Executive Order 7065, June 7, 1935) and then the National Resources Planning Board (July 1, 1939). A principal activity of the Board was the preparation of a three-volume study entitled "Research—A National Resource."

January 22, 1935: Federal Aviation Commission, appointed by the President as provided in the Air Mail Act of June 12, 1934, submitted its report and set forth broad policy on all phases of aviation and the relation of Government thereto. It recommended strengthening of commercial and civil aviation, expansion of airport facilities, and establishment of more realistic procurement practices from industry. It recommended continued study of air organization toward more effective utilization and closer interagency relationships, to include expansion of experimental and development work and its close coordination with the NACA.

April 27, 1935: The Department of Agriculture was directed to establish a Soil Conservation Service to provide for the protection of land resources against soil erosion through research, preventive measures, cooperative arrangements, and land acquisition where necessary. (Public Law 46; 49 Stat. 163)

June 29, 1935: Bankhead-Jones Act provided for the expansion of scientific, technical, economic and other research into the laws and principles underlying basic problems in agriculture. By appropriating funds for basic research, Congress recognized that its value may exceed that of research on specific problems.

Department of Agriculture implementation of the program authorized by this act led to the establishment of regional laboratories located according to problems of that area. (Public Law 182: 49 Stat. 436)

August 14, 1935: The Social Security Act was an event of major importance in the progress of public health in the United States. This act authorized health grants to the States on the principle that the most effective way to prevent the interstate spread of disease is to improve State and local public health programs. With this legislation, the Public Health Service became adviser and practical assistant to State and local services. (Public Law 74–271; 49 Stat. L. 634)

December 1935: Science Advisory Board transferred to Committee on Government Relations of NAS which was renamed the Government Relations and Science Advisory Committee. The Committee was discontinued in Oct. 1939.

May 6, 1936: Construction authorized for what later was named the David W. Taylor Model Basin, to provide a facility for use of the Navy Bureau of Construction and Repair in investigating and determining shapes and forms to be adopted for U.S. naval vessels, and including aircraft. (Public Law 568; 49 Stat. 1263)

May 20, 1936: Rural Electrification Act of 1936 established a Rural Electrification Administration to make loans to states to extend electric power to rural areas and to make and publish studies concerning the progress of the program. (Public Law 605; 49 Stat. 1363)

August 5, 1937: A law established the National Cancer Institute to conduct and support research relating to the cause, diagnosis, and treatment of cancer. The law authorized the Surgeon General to make grants-in-aid for research projects in the field of cancer, provide fellowships, train personnel, and assist

the States in their efforts toward cancer prevention and control. (Public Law 75–244; 50 Stat. L. 559)

February 16, 1938: Agricultural Adjustment Act of 1938 declared it to be the policy of Congress to conserve and improve the nation's soil resources; to regulate commerce in cotton, wheat, corn, tobacco, and rice to assure a balanced flow, and to bring about "parity prices" and "parity income" for agricultural producers. The act authorized funds to establish and maintain laboratories to conduct research on the industrial utilization of agricultural products. One of four regional research laboratories thus established later became famous for its role in developing mass production of penicillin. (Public Law 430; 52 Stat. 31)

June 23, 1938: Civil Aeronautics Act of 1938 coordinated all nonmilitary aviation under a new Civil Aeronautics Authority. An Air Safety Board was established to investigate and report on accidents and make recommendations for accident prevention. (Public Law 706; 52 Stat. 973)

April 3, 1939: The Reorganization Act of 1939 transferred the Public Health Service from the U.S. Treasury Department to the Federal Security Agency. (Public Law 76–19; 53 Stat. L. 561)

July 1, 1939: Federal Security Agency created, grouping under one administration those agencies whose major purposes were to promote social and economic security, educational oportunity, and health of the citizens of the Nation; namely, Office of Education, Public Health Service, Social Security Board, U.S. Employment Service, Civilian Conservation Corps, and National Youth Administration. (Reorganization Plan I, effective this date.)

August 9, 1939: Congress authorized construction of second NACA research station at Moffett Field, Calif., which became the Ames Aeronautical Laboratory. (Public Law 361; 53 Stat. 1306)

June 26, 1940: Congress authorized construction of the third NACA laboratory near Cleveland, Ohio, which became Aircraft Engine Research Laboratory. In 1948, it was named for George W. Lewis, NACA Director of Aeronautical Research, 1924–47. (Public Law 667; 54 Stat. 599)

July 31, 1940: A joint resolution appropriating $25 million for fiscal year 1941 to the Tennessee Valley Authority for facilities needed for the national defense. (Public Resolution 95; 54 Stat. 781)

May 7, 1941: An act providing for annual inspections of coal mines by the Secretary of the Interior acting through the U.S. Bureau of Mines to assure health and safety conditions, to determine basis for expenditure of public funds toward this goal or for educational materials and to obtain information for Congress on accidents, occupational diseases and other matters for legislative action. (Public Law 49; 55 Stat. 177)

June 28, 1941: Office of Scientific Research and Development (OSRD) in the Office of Emergency Management was created by President Roosevelt by Executive Order 8807.

July 16, 1941: A joint resolution appropriating an additional sum of $40 million for the Tennessee Valley Fund for fiscal year 1942.

The resolution also amended the 3d proviso in the Military Appropriation Act for 1942 (Public Law 139) to read "*Provided further*, That with respect to the $500,000,000 provided by this Act which is not for payments under the aforesaid contract authorizations, no obligations shall be incurred for or on account of the objects specified under this head except in pursuance of said specific appropriation." (Public Law 181; 55 Stat. 597)

August 21, 1941: An act prohibiting foreign patenting of an invention made in the United States, except when licensed to do so by the Commissioner of Patents. (Public Law 239; 55 Stat. 657)

September 24, 1941: An act authorizing funds for construction of an Army

Medical Library and Museum in the District of Columbia. (Public Law 256; 55 Stat. 731)

October 31, 1942: An act giving the Government power to fix royalties for the use of inventions needed in the prosecution of the war. (Public Law 768; 56 Stat. 1013)

April 16, 1943: Female physicians and surgeons in the Medical Corps of the Army and Navy were authorized by this act. Persons so appointed were commissioned in Army or the Naval Reserve. (Public Law 38; 57 Stat. 65)

July 12, 1943: A Pharmacy Corps was established in the Medical Department of the Army. (Public Law 130; 57 Stat. 430)

November 11, 1943: Public Health Service Act of 1943. Set forth the organization and structure of the Public Health Service, including provisions for its operation in time of war and the effect of the war upon commissioned officers of the corps. (Public Law 184; 57 Stat. 587) (This act was repealed by a more comprehensive act of July 1, 1944)

April 5, 1944: The Secretary of the Interior through the Bureau of Mines was authorized to construct and operate demonstration plants to produce synthetic liquid fuels from coal, oil shales, agricultural and forestry products, and other substances, for wartime needs. In this connection the Secretary of Interior was authorized to conduct laboratory research and development work, to acquire patent rights, to contract for plant construction and operations, to cooperate with other public or private agencies toward this end, and to sell the products of the plants at cost with priority to Federal and State agencies. (Public Law 290; 58 Stat. 190)

July 1, 1944: The Public Health Service Act consolidated and revised laws pertaining to the Public Health Service and divided the Service into the Office of the Surgeon General, Bureau of Medical Services, Bureau of State Services, and the National Institute of Health. The act gave the Surgeon General broad powers to conduct and support research into the diseases and disabilities of man, authorized projects and fellowships, and made the National Cancer Institute a division of NIH. The act also empowered the Surgeon General to treat at Public Health Service medical facilities, for purposes of study, persons not otherwise eligible for such treatment. (Public Law 78–410; 58 Stat. L. 682) Under this provision, the Clinical Center was later established.

September 21, 1944: Department of Agriculture Organic Act of 1944 consolidated the department's functions with respect to eradication and control of animal and plant pests and diseases, fire control, national forest management, soil conservation, and operation of the Farm Credit Administration and the Rural Electrification Administration. (Public Law 425; 58 Stat. 734)

April 25, 1945: Supplemental appropriation passed by Congress authorized expanded research on guided missiles at NACA Langley Laboratory, including establishment of a rocket launch facility at Wallops Island, Va. (Public Law 40; 59 Stat. 82)

June 6, 1945: The Bankhead-Flannagan Act provided for expansion of county extension work. The act amended an earlier act of June 29, 1935 which provided for research into basic laws and principles relating to agriculture, for the further development of cooperative agricultural extension work and the more complete endowment and support of land-grant colleges. (Public Law 76; 59 Stat. 231)

July 3, 1946: The National Mental Health Act was designed to improve the mental health of U.S. citizens through research into the causes, diagnosis, and treatment of psychiatric disorders. It authorized the Surgeon General to support research, training, and assistance to State mental health programs. (Public Law 79–487; 60 Stat. L. 421) (The National Institute of Mental Health was established under the authority of this law on April 1, 1949.)

July 5, 1945: Dr. Vannevar Bush, Director, Office of Scientific Research and Development, submitted report, "Science, the endless frontier" to President Truman covering all aspects of the study of post-war science which President Roosevelt had requested him to make in November 1944.

A principal recommendation of the report was for the establishment of a National Research Foundation, responsible to the President and to Congress, "to develop and promote a national policy for scientific research and scientific education" and for other purposes.

July 15, 1946: Reorganization Plan No. 2, effective this date, transferred to the Federal Security Agency (the predecessor of HEW), a number of activities relating to education, health, welfare and social insurance. The Social Security Board was abolished and its functions were transferred to the Federal Security Administrator.

August 1, 1946: Atomic Energy Act of 1946 established the Atomic Energy Commission to be the exclusive owner of all facilities for the production of fissionable materials, and of all fissionable material produced. The Commission was made responsible for research and production of atomic energy for military purposes. All patents relating to fissionable materials were to be filed with the Commission.

The act also established the Joint Committee on Atomic Energy, the only joint congressional committee with substantive oversight powers. (Public Law 585; 60 Stat. 755)

August 1, 1946: Vocational Education Act of 1946 was a revision of the earlier act of June 8, 1936. Authorized annual appropriations of Federal aid funds to the States for training in agriculture, home economics, trades and industry and distributive occupations. Also appropriated an annual sum to the Office of Education for studies and investigations in the field. (Public Law 586; 60 Stat. 775)

August 1, 1946: An act to establish an Office of Naval Research in the Department of the Navy; to plan, foster, and encourage scientific research in recognition of its paramount importance as related to the maintenance of future naval power, and the preservation of national security; to provide within the Department of the Navy a single office, which, by contract and otherwise, shall be able to obtain, coordinate, and make available to all bureaus and activities of the Department of the Navy, world-wide scientific information and the necessary services for conducting specialized and imaginative research; to establish a Naval Research Advisory Committee consisting of persons preeminent in the fields of science and research, to consult with and advise the Chief of such Office in matters pertaining to research. (Public Law 588; 60 Stat. 779)

August 2, 1946: Legislative Reorganization Act of 1946 redefined the standing committees of the Senate and House of Representatives, and enumerated the jurisdictions of each committee. The act also established an enlarged and continuing separate department of the Library of Congress, the Legislative Reference Service.

August 12, 1946: National Air Museum was established under the Smithsonian Institution by act of Congress. (Public Law 722; 60 Stat. 997)

October 17, 1946: By E.O. 9791, President Truman established a Presidential Scientific Research Board under Dr. John R. Steelman, Director of War Mobilization and Reconversion, in the Executive Office of the President, to investigate and report on the entire scientific program of the Federal Government with recommendations for providing coordination and improving efficiency of Federal research and development.

April 16, 1947: Army-Navy Nurses Act. Established a permanent Nurse Corps in the Army and Navy and a Women's Medical Specialist Corps in the Army Medical Department. (Public Law 36; 61 Stat. 41)

July 7, 1947: A Commission on Organization of the Executive Branch of the Government (First Hoover Commission) was established. One of the areas

which it examined and reported on was Federal research. (Public Law 162; 61 Stat. 246)

July 27, 1947: S. 526, to establish a National Science Foundation, received final approval by Congress on this date. It was vetoed by President Truman on August 6, 1947, principally because of disagreement over the administrative structure of the proposed Foundation. Congressional action on this bill culminated two years of work since the first bills to create a National Science Foundation were introduced on July 19, 1945.

July 30, 1947: A temporary Congressional Aviation Policy Board was established to survey and report on the development of a national aviation policy adequate for national defense, interstate and foreign commerce, and postal service needs. (Public Law 287; 61 Stat. 676) (The Board submitted its findings in Senate Report 949 of March 1, 1948)

August 5, 1947: Army-Navy Public Health Service Medical Officer Procurement Act of 1947. Provided additional inducements to physicians, surgeons and dentists to make a career of U.S. military, naval or public health services. (Public Law 365; 61 Stat. 776)

August 6, 1947: By act of Congress, the duties and functions of the Coast and Geodetic Survey were consolidated.

August 6, 1947: President Truman vetoed S. 526, the first bill passed by Congress to establish a National Science Foundation and an Interdepartmental Committee on Science on the grounds that the proposed organizational structure would make it impossible for him to assure proper administration.

September-October 1947: The 5-vol. Steelman report entitled "Science and public policy" was issued. With respect to Executive Office science organization, the report recommended that the President designate a member of the White House staff for scientific liaison, that the Bureau of the Budget set up a unit for reviewing Federal scientific research and development programs, and that an Interdepartmental Committee for Scientific Research be created.

December 24, 1947: Interdepartmental Committee on Scientific Research and Development established by E.O. 9912. Presidential assistant, Dr. John R. Steelman, was designated to provide liaison between the President and the committee and between the office of the President and the scientific community.

December 31, 1947: Office of Scientific Research and Development in the Executive Office of the President was terminated and remaining personnel, records, and property were transferred to the National Military Establishment. OSRD, created in 1941, in the Office for Emergency Management, had under Director Vannevar Bush served as a high-level coordinating body for scientific research and medical problems related to national defense during World War II.

April 24, 1948: Secretary of Agriculture is authorized to establish research laboratories for research and study of foot-and-mouth disease or other animal diseases which constitute a threat to the U.S. livestock industry. (Public Law 496; 62 Stat. 198)

June 16, 1948: An act authorizing the Weather Bureau to study the causes and characteristics of thunderstorms, hurricanes, cyclones and other atmospheric disturbances. (Public Law 657; 62 Stat. 470)

June 16, 1948: The National Heart Act authorized the National Heart Institute to conduct, assist, and foster research; provide training; and assist the States in the prevention, diagnosis, and treatment of heart diseases. In addition, the act changed the name of National Institute of Health to National Institutes of Health. (Public Law 80-655; 62 Stat. L. 464)

June 24, 1948: The National Dental Research Act authorized the National Institute of Dental Research to conduct, assist, and foster dental research;

provide training; and cooperate with the States in the prevention and control of dental diseases. (Public Law 80–755; 62 Stat. L. 598)

August 22, 1949: The act authorized the Smithsonian Institution to continue anthropological research among the American Indians. Also authorized appropriations for maintenance of the Astrophysical Observatory, and for other expenses of the Smithsonian Institution. (Public Law 259; 63 Stat. 623)

October 25, 1949: The act authorized construction and equipment of a radio laboratory building for the National Bureau of Standards. (Public Law 366; 63 Stat. 886) Another act approved this date authorized construction of a guided-missile research laboratory building for the National Bureau of Standards. (Public Law 386; 63 Stat. 905)

October 27, 1949: The Unitary Wind Tunnel Act authorized the construction of $136 million for new NACA facilities, $10 million for wind tunnels at universities, $6 million for a wind tunnel at the David W. Taylor Model Basin, and $100 million for the establishment of the Air Force Arnold Engineering Development Center at Tullahoma, Tenn., in recognition of the fact that industry could not subsidize expensive wind tunnels for research in transonic and supersonic flight. (Public Law 415; 63 Stat. 936)

May 10, 1950; National Science Foundation Act of 1950 established a Federal agency, the National Science Foundation, for the specific purpose of promoting the progress of science in the Nation. The Foundation was directed to carry out its mission by developing a national policy for the promotion of basic research and education in the sciences. The act was the culmination of a five-year post World War II effort to assure that the United States would continue to have a science reservoir of research and trained manpower. (Public Law 81–507; 64 Stat. 149)

July 21, 1950: The National Bureau of Standards was authorized to use funds for certain enumerated activities, including laboratory and office rental space, the purchase of reprints, and subsistence and research in the Arctic region. (Public Law 618; 64 Stat. 370)

July 22, 1950: The Act of March 3, 1901 which established the National Bureau of Standards was amended by this act which in enumerating the basic authority of the Department of Commerce for its scientific functions also redescribed the functions of the Bureau. (Public Law 619; 64 Stat. 371)

August 8, 1950: The act directed the National Advisory Committee for Aeronautics to equip and operate research stations, and authorized $16.5 million to expand existing facilities. (Public Law 672; 64 Stat. 418)

August 15, 1950: The Omnibus Medical Research Act authorized the Surgeon General to establish the National Institute of Neurological Diseases and Blindness, as well as additional institutes, to conduct and support research and research training relating to other diseases and groups of diseases. (Public Law 81–692; 64 Stat. 443.) (The National Institute of Arthritis and Metabolic Diseases and the National Institute of Neurological Diseases and Blindness were established under the authority of this act on November 22, 1950. Under this same act, the National Institute of Allergy and Infectious Diseases was established on December 29, 1955, replacing the National Microbiological Institute which was originally established November 1, 1948, under authority of section 202 of the Public Health Service Act.)

September 9, 1950: This act established a clearing house for the collection and dissemination of technological, scientific, and engineering information in the Department of Commerce as a service to business and industry. (Public Law 776; 64 Stat. 823)

April 20, 1951: An 11-member Science Advisory Committee in the Office of Defense Mobilization, within the Executive Office, was established by President Truman "to advise the President and Mobilization Director Charles E. Wilson in matters relating to scientific research and development for defense."

February 1, 1952: Invention Secrecy Act of 1951 provided for the withholding of certain patents that might be detrimental to the national security. (Public Law 256; 66 Stat. 3)

May 13, 1952: Construction of a new geomagnetic station to be operated by the Coast and Geodetic Survey was authorized.

Secretary of Commerce was authorized to engage in research in science of geomagnetism and to conduct development work to improve magnetic procedures and instruments. (Public Law 338; 66 Stat. 70)

June 23, 1952: Additional aeronautical research facilities were authorized by this act for the National Advisory Committee for Aeronautics. (Public Law 403; Stat. 153)

July 3, 1952: This act authorized the Secretary of the Interior to conduct research and development on the problem of desalination. Funds for acquiring property and facilities and contract authority were authorized. The Secretary shall coordinate activities with the Secretary of Defense where feasible. (Public Law 448; 66 Stat. 328)

July 16, 1952: Military research and development was the subject of this act which authorized the Secretaries of the 3 military departments to establish advisory committees and appoint part-time personnel necessary for research and development activities, and to make 5-year contracts, with extension rights, to carry out this program. The act also required the Secretary of each department to report on contracts entered into every six months. The objective of the act was to facilitate the performance of research and development work in the armed forces. (Public Law 557; 66 Stat. 725)

January 1, 1953: By Act of July 19, 1952, earlier acts relating to patents were revised and codified, effective this date. (66 Stat. 792)

March 9, 1953: President Eisenhower appointed Admiral Lewis L. Strauss as a Special Assistant to serve him as "liaison adviser on atomic energy matters." He occupied this post and shortly thereafter that of Chairman of the AEC until 1958.

April 11, 1953: Reorganization Plan No. 1 of 1953 creating a Department of Health, Education, and Welfare went into effect this date. By this action Cabinet representation was accorded to Government functions in health, education and welfare.

June 26, 1953: An Act redefining Federal assistance for cooperative agricultural extension work, and repealing a number of acts which amended the Smith-Lever Act of May 8, 1914. (Public Law 83; 67 Stat. 83)

July 10, 1953: A new Commission on Organization of the Executive Branch (Second Hoover Commission) was set up by this act to study and recommend regarding functions which are not necessary to Government efficiency or which compete with private enterprise (Public Law 108; 67 Stat. 142)

August 8, 1953: By legislation approved this date, the limitation in the National Science Foundation Act of 1950 which restricted its appropriation to $15 million in any fiscal year was removed. (Public Law 88–233; 67 Stat. 488)

August 13, 1953: Created a national advisory committee to study public and private methods of weather control and modification. (Public Law 256; 67 Stat. 559)

March 17, 1954: President Eisenhower issued E.O. 10521, which clarified and defined Federal agencies' responsibilities for research and development, and specified a broader role for the NSF than that in its 1950 charter by providing that the Foundation "shall from time to time recommend to the President policies for the Federal Government which will strengthen the national scien-

tific effort and furnish guidance toward defining the responsibilities of the Federal Government in the conduct and support of scientific research."

May 13, 1954: This act created the Saint Lawrence Seaway Development Corporation and authorized U.S. participation with Canada in development of a St. Lawrence Seaway. (Public Law 358: 68 Stat. 92)

May 27, 1954: Authorized construction of certain aeronautical research facilities by National Advisory Committee for Aeronautics to be used for research for ICBM fuel and high-speed seaplane fighters. (Public Law 371; 68 Stat. 142)

July 28, 1954: Authorized research work of the Department of Agriculture to be conducted by private contracts. Amended Act of June 29, 1935 (the Bankhead-Jones Act). (Public Law 545; 68 Stat. 574)

August 26, 1954: The Supplemental Appropriations Act, 1955, appropriated $2 million to the National Science Foundation to support the U.S. International Geophysical Year program sponsored and coordinated by the National Academy of Sciences. This was the initial appropriation for the IGY program. (Public Law 663; 68 Stat. 818)

August 30, 1954: The Atomic Energy Act of 1954 to amend the Atomic Energy Act of 1946. Facilitated industrial uses of atomic energy; authorized exchange of information with friendly free governments and encouraged formation of an international atomic pool for peaceful purposes. This was the first major amendment of the Atomic Energy Act of 1946. (Public Law 83–703; 68 Stat. 919)

May 23, 1955: Still another evidence of recognition of the need to promote aeronautical research for defense purposes was this authorization to the National Advisory Committee for Aeronautics for the construction of certain research facilities. Total cost was not to exceed $13.3 million. (Public Law 44; 69 Stat. 65)

June 28, 1955: This act authorized the construction of a building for a Museum of History and Technology for the Smithsonian Institution. (Public Law 106; 69 Stat. 189)

June 29, 1955: Amended the Act of July 3, 1952 relating to research in the development and utilization of saline water by providing for cooperation with additional Federal agencies and foreign public or private agencies. Authorized total funding of $10 million for period fiscal 1953 to 1963. (Public Law 111; 69 Stat. 198)

June 30, 1955: Further International Geophysical Year funding. The Independent Offices Appropriation Act 1956, appropriated $10 million to the National Science Foundation, to remain available until June 30, 1960, for the U.S. IGY program (Public Law 112; 69 Stat. 208)

July 14, 1955: An act authorizing the Secretary of Health, Education, and Welfare and the Surgeon General of the Public Health Service, in cooperation with State and local governments and public and private agencies and institutions, to recommend research programs, to provide technical assistance and encourage cooperative action for eliminating or reducing air pollution.

July 28, 1955: The Mental Health Study Act authorized the Surgeon General to award grants to nongovernmental organizations for partial support of a nationwide study and reevaluation of the problems of mental illness. Under this act, the Joint Committee on Mental Illness and Health was awarded grant support for 3 years. (Public Law 84–182; 69 Stat. L. 381)

May 10, 1956: Executive Order 10668 amended Executive Order 2859 of May 11, 1918, which formally established the National Research Council. The new Executive order clarified Government representation on the Council.

May 19, 1956: National Science Foundation received an appropriation of $27

million to remain available until June 30, 1960, for the International Geophysical Year under the Second Supplemental Appropriations Act, 1956. (Public Law 533; 70 Stat. 167)

July 3, 1956: The National Health Survey Act authorized the Surgeon General to survey sickness and disabilities in the United States on a sampling basis. (Public Law 84–652; 70 Stat. L. 489)

July 28, 1956: The Alaska Mental Health Enabling Act provided for territorial treatment facilities to eliminate the need to transport the mentally ill outside Alaska. It also authorized Public Health Service grants to Alaska for its mental health program. (Public Law 84–830; 70 Stat. L. 709)

July 30, 1956: The Health Research Facilities Act of 1956 authorized a Public Health Service program of Federal matching grants to public and nonprofit institutions for the construction of health research facilities. (Public Law 84–835; 70 Stat. L. 717)

August 2, 1956: The Health Amendments Act of 1956 authorized the Surgeon General to assist in increasing the number of adequately trained nurses and professional public health personnel. It also authorized Public Health Service grants to support the development of improved methods of care and treatment of the mentally ill. (Public Law 84–911; 70 Stat. L. 923)

August 3, 1956: This act established a National Library of Medicine in the Public Health Service. (Public Law 941; 70 Stat. 960)

August 28, 1957: Supplemental Appropriation Act, 1958, appropriated $34,200,000 for the U.S. scientific satellite "to be derived by transfer from such annual appropriations available to the Department of Defense as may be determined by the Secretary of Defense, to remain available until expended." (Public Law 85–170; 71 Stat. 428)

September 2, 1957: Up to $45,450,000 was authorized by this act for the construction of aeronautical research facilities and land acquisition by the National Advisory Committee for Aeronautics. (Public Law 85–253; 71 Stat. 568)

November 7, 1957: President Dwight D. Eisenhower announced the creation of the Office of Special Assistant to the President for Science and Technology, and appointed James R. Killian, Jr., to be his first science advisor. (Radio and television address to the Nation, this date.)

November 27, 1957: Science Advisory Committee of Office of Defense Mobilization was transferred to the Executive Office of the President, and enlarged and reconstituted, was redesignated the President's Science Advisory Committee.

The action was taken to provide a more direct relationship between the Committee, the President, and the Special Assistant for Science and Technology.

July 11, 1958: An amendment to the National Science Foundation Act of 1950 authorized and directed the Foundation "to initiate and support a program of study, research, and evaluation in the field of weather modification." (Public Law 85–510; 72 Stat. 353)

July 21, 1958: House Committee on Science and Astronautics established by passage of House Resolution 580.

July 24, 1958: The Senate created a new standing Committee on Aeronautical and Space Sciences. (Senate Resolution 327)

July 29, 1958: National Aeronautics and Space Act of 1958 established the National Aeronautics and Space Administration and a National Aeronautics and Space Council and defined responsibility for space activities. In a statement issued at the signing of the law, President Eisenhower said: "The present National Advisory Committee for Aeronautics (NACA) with its large and competent staff and well-equipped laboratories will provide the nucleus for NASA. The NACA has an established record of research performance and of

cooperation with the armed services. The coordination of space exploration responsibilities with NACA's tradition aeronautical research functions is a natural evolution * * * [one which] should have an even greater impact on our future." (Public Law 85–568; 72 Stat. 426)

July 29, 1958: The National Aeronautics and Space Act of 1958 which established the National Aeronautics and Space Administration also established a 9-member advisory National Aeronautics and Space Council, consisting of the President and other named representatives.

August 1, 1958: Authorized the Department of the Interior to undertake continuing studies on effects of insecticides, herbicides, fungicides and pesticides upon fish and wildlife. (Public Law 85–582; 72 Stat. 479)

August 23, 1958: Federal Aviation Agency created with passage by Congress of the Federal Aviation Act. (Public Law 726; 72 Stat. 731) (FAA was transferred to the Department of Transportation by the act of Oct. 15, 1966 which established the Department)

September 2, 1958: National Defense Education Act of 1958. This was the first general Federal aid-to-education legislation since the Morrill Act of 1862. Major administrative responsibility for the Act was assigned to the Department of Health, Education, and Welfare. Title IX of the Act created a Science Information Service in the National Science Foundation under the direction of a Science Information Council. This latter action was evidence of congressional recognition of the science information problem and an attempt to deal with it. (Public Law 85–864; 71 Stat. 1580)

September 2, 1958: A joint resolution directing the Secretary of the Interior to contract for the construction of demonstration plants for the production of usable water from saline water. (Public Law 85–883; 72 Stat. 1706)

March 13, 1959: By E.O. 10807, President Eisenhower established the Federal Council for Science and Technology, consisting of his Special Assistant for Science and Technology and representatives of the major science-oriented departments and agencies, to promote interagency cooperation and coordination in the planning and management of Federal scientific and technological programs.

E.O. 10807 amended E.O. 10521 of March 17, 1954, to limit the National Science Foundation's policy advisory role to basic scientific research and education in sciences, rather than "scientific research" in general as the 1954 E.O. had specified. A new section 10 of E.O. 10807 gave the Foundation a leadership role in the coordination of Federal scientific information activities of the Federal Government.

E.O. 10807 also abolished the Interdepartmental Committee on Scientific Research and Department.

September 8, 1959: An amendment to the National Science Foundation Act of 1950 clarified the Foundation's authority to support programs to strengthen the nation's scientific research potential. (Public Law 86–232; 73 Stat. 467)

September 23, 1959: This act defined procedures and criteria whereby the Atomic Energy Commission may "turn over" to individual States certain defined areas of regulatory jurisdiction over atomic materials.

The act also established a Federal Radiation Council to advise the President on radiation matters. (Public Law 86–373)

April 1960: The Subcommittee on National Policy Machinery of the Senate Committee on Government Operations held a series of hearings, entitled "Science, Technology, and the Policy Process."

July 7, 1960: This law sought to encourage and stimulate the production and conservation of coal in the United States by authorizing the Secretary of the Interior to establish an Office of Coal Research and contract for research to develop better methods of mining, preparing and utilizing coal. (Public Law 86–599)

September 9, 1960: Authorized the Surgeon General to make project grants to schools of public health and schools of nursing or engineering which provide graduate or specialized training in public health for nurses or engineers, in order to strengthen and expand training in these areas. (Public Law 86–720)

April 25, 1961: An amendment to the National Aeronautics and Space Act of 1958 revised the membership and functions of the National Aeronautics and Space Council and brought the Council into the Executive Office of the President, with the Vice President as Chairman. (Public Law 87–26; 75 Stat. 46)

June 14, 1961: The Subcommittee on National Policy Machinery submitted a study entitled "Science Organization and the President's Office" to the Senate Committee on Government Operations, recommending the creation of an Office of Science and Technology within the Executive Office of the President.

September 22, 1961: The saline water conversion program was expanded and extended by this act which amended the act of July 3, 1952. Authority of the Secretary of the Interior to conduct research and development activities and to cooperate with other Federal agencies was extended in considerable detail. (Public Law 87–295; 75 Stat. 628)

September 26, 1961: A United States Arms Control and Disarmament Agency was established by this act. Section 31 of Title III set forth the range of research activities which the Director was authorized to engage in. The creation of a separate agency was evidence of the United States intention to move ahead toward agreements for reduction and control of armaments, including thermonuclear, nuclear, missile, conventional, bacteriological, chemical, and radiological weapons. (Public Law 87–297; 75 Stat. 631)

June 8, 1962: In the absence of Congressional disapproval, Reorganization Plan No. 2 of 1962, establishing the Office of Science and Technology in the Executive Office of the President, became effective.

The Plan transferred certain functions from National Science Foundation to the new OST relating to the coordination of Federal policies for the promotion of basic research and education in the sciences, and those functions with respect to the evaluation of scientific research programs of Federal agencies. (27 F.R. 5419)

August 31, 1962: Communications Satellite Act of 1962 created a private communication satellite system to serve the needs of the United States and other countries. (Public Law 87–624; 76 Stat. 419).

October 17, 1962: This act authorized the Surgeon General to establish the National Institute of General Medical Sciences and the National Institute of Child Health and Human Development. The latter was authorized to conduct and support research and training relating to maternal health; child health; human development, in particular the special health problems of mothers and children; and the basic sciences relating to the processes of human growth and development. The former was authorized to conduct and support research in the basic medical sciences and related behavioral sciences which have significance for two or more institutes, or which are outside the general area of responsibility of any other institute. (Public Law 87–838; 76 Stat. L. 1072) (On January 30, 1963, the National Institute of Child Health and Human Development and the National Institute of General Medical Sciences were established under this act.)

October 16–November 20, 1963: The Subcommittee on Science, Research, and Development of the House Committee on Science and Astronautics held its initial hearings, entitled "Government and Science," to identify problems in the Government-science relationship and to assign priorities for dealing with them.

December 5, 1964: National Academy of Engineering of the NAS–NRC was established with the adoption by the Council of the NAS of Articles of Organization making the new Academy a parallel organization.

July 13, 1965: Environmental Science Services Administration established with entry into force of Reorganization Plan 2 of 1965, effective this date. Transferred to the new agency were the Weather Bureau, the Coast and Geodetic Survey, and the Central Radio Laboratory of the NBS.

July 22, 1965: Water Resources Planning Act provided for comprehensive planning for water resources development to be carried out by Federal-State River Basin Commissions reporting to the President through a Cabinet level Water Resources Council. (Public Law 89–80; 79 Stat. 244)

September 14, 1965: State Technical Services Act of 1965 was an attempt to make more readily available to American business, commerce and industry the benefits of federally financed research and other research by providing a national program of incentives and support to the States who establish and maintain technical service programs to accomplish the above objective. (Public Law 89–182; 79 Stat. 679)

September 30, 1965: This act authorized the Secretary of Commerce to undertake research and development in high-speed ground transportation, to undertake demonstration projects to assess public response to improvements in intercity rail passenger service, and to embark on a national program to improve the scope and availability of transportation statistics. The act provided for Federal assistance in an area which private rail carriers could no longer handle due to loss of business because of competition from other forms of transportation. (Public Law 89–220; 79 Stat. 893)

October 2, 1965: Water Quality Act of 1965 strengthened Federal water programs by creating a new agency, the Federal Water Pollution Control Administration to administer the program under the Secretary of Health, Education, and Welfare. A new research and demonstration program was authorized relating to controlling sewerage from storm sewers. Funding for ongoing research was increased as were program and construction grants. (Public Law 89–234; 79 Stat. 903)

June 17, 1966: Public Law 89–454 established a temporary National Council on Marine Resources and Engineering Development in the Executive Office of the President under the chairmanship of the Vice President to plan and develop a coordinated Federal program in marine science activities. The legislation also established a Commission on Marine Science, Engineering and Resources to make a comprehensive investigation and study of marine science and recommend an overall plan for a national oceanographic program.

The National Council on Marine Resources went out of existence June 30, 1971, following the submission of the Commission's final report.

October 15, 1966: A Department of Transportation was established by this act which brought together several Federal agencies with missions relating to automobile, rail and air travel. In fulfillment of a Congressional finding that technological advances in transportation required stimulation, the Secretary of Transportation was authorized to undertake research and development in all modes of transportation and facilities. (Public Law 89–670; 80 Stat. 931)

November 8, 1967: Membership of the Federal Council for Science and Technology was enlarged by the addition of representatives from the Department of State, the Department of Housing and Urban Development, and the Department of Transportation. (Executive Order 11381, this date.)

January 2, 1968: An act extending the time for the National Commission on Marine Science, Engineering, and Resources to render its report to January 9, 1969, and authorizing the continuation of the National Council on Marine Resources and Engineering Development until June 30, 1969. (Public Law 90–242; 81 Stat. 780)

July 11, 1968: This act authorized the Secretary of Commerce to arrange for the collection of standard reference data for the benefit of scientists and the general public. The Act is administered by the National Bureau of Standards. (Public Law 90–396; 82 Stat. 339)

July 18, 1968: Amendments to the National Science Foundation Act of 1950 constitute the first major amendment of the enabling act, although several minor changes have preceded it. The act clarifies the administrative direction of the agency as between the Director and the National Science Board. In addition, it enables the Foundation to support applied research relevant to its mission and it emphasizes the Foundation's responsibilities to report on the status of science in the Federal Government. The act also requires the Foundation to obtain annual authorization for its funds, replacing the continuing authorization contained in the original legislation. (Public Law 90–407; 82 Stat. 360)

July 21, 1968: Aircraft Noise Abatement Act of this date amended the Federal Aviation Act to impose regulations for the abatement of aircraft noise. The Federal Aviation Administration is empowered to set aircraft noise and sonic boom standards for commercial aircraft. Aircraft will be certified for flying only if they conform to these standards. (Public Law 90–411; 82 Stat. 395)

August 9, 1968: The question whether the metric system should be adopted in the United States becomes of greater concern as more and more nations adopt it. Congress took an important step with this bill which authorized the Secretary of Commerce to study the advantages and disadvantages of increased use of the metric system in the United States and to report on the matter to Congress within 3 years. (Public Law 90–472; 82 Stat. 693) A final report and 12 supporting studies were transmitted to Congress in 1971.

August 16, 1968: A National Eye Institute in the National Institutes of Health was approved with the passage of the National Eye Institute Act. The Institute will focus on curing and preventing blindness, and other eye disorders and will conduct and support research and training on the health problems and needs of the blind. It is hoped that the creation of a separate institute devoted to the problems of sight will result in significant advances in this field. (Public Law 90–489; 82 Stat. 771)

September 26, 1968: This act established a National Water Commission to review water resources problems and programs. The presidentially-appointed commission is expected to submit recommendations that will aid in more efficient use of existing water supplies and suggest new ways to develop water. (Public Law 90–515; 82 Stat. 868) The final report of the Commission was submitted June 14, 1973 and the Commission went out of existence later that year.

October 18, 1968: Radiation Control for Health and Safety Act of 1968 amended the Public Health Service Act to insert safeguards to workers and consumers who make or use electronic products, to assure against "unnecessary hazardous radiation." Safety standards are to be set by the Secretary of Health, Education, and Welfare after consultation with the Commerce Department (National Bureau of Standards) and advisory committees represented by Government, industry and the general public. The legislation is significant because electronic products are manufactured and used so widely that almost the entire population of the nation can be affected by potential radiation damage. (Public Law 90–602; 82 Stat. 1173)

March 5, 1970: By E.O. 11514, responsibilities of the Council on Environmental Quality in the Executive Office of the President, which had been established by P.L. 91–190, were set forth.

July 1, 1970: By Reorganization Plan No. 2 of 1970 and E.O. 11541, July 1, 1970, the Bureau of the Budget in the Executive Office of the President was redesignated as the Office of Management and Budget.

Reorganization Plan No. 2 also established a Domestic Council in the Executive Office of the President. Duties of the Council, including the developing for the President of alternative proposals for reaching national domestic goals, and providing policy advice to the President on domestic issues, were spelled out in E.O. 11541.

July 1, 1971: Domestic Council New Technology effort started under William M. Magruder.

October 26, 1971: P.L. 91–510, Legislative Reorganization Act of 1970, approved this date, directed the first major Congressional reorganization since the Legislative Reorganization Act of 1946. Among the provisions of the Act were the assignment of review and analytical responsibilities to the General Accounting Office and the complementary strengthening of the Legislative Reference Service, redesignated Congressional Research Service to emphasize its research responsibilities.

December 1, 1972: Treasury Secretary George P. Shultz named Assistant to the President for Economic Affairs and Chairman of a newly-established Executive Office Council on Economic Policy.

January 3, 1973: The White House announced that Dr. Edward E. David, Jr. had resigned his positions as Presidential Science Adviser and Director, Office of Science and Technology, to return to private industry.

January 26, 1973: Reorganization Plan No. 1 of 1973 transmitted to the Congress. The plan provided for the abolishment and/or transfer out of the Executive Office of the President of the Office for Emergency Planning, the Office of Science and Technology, and the National Aeronautics and Space Council. Certain functions of the Office of Science and Technology were transferred to the Director of the National Science Foundation.

January 1973: The pro forma resignations of the President's Science Advisory Committee preceding the start of a new Presidential administration were accepted and new members were not appointed.

February 22, 1973: Subcommittee on Reorganization, Research, and International Organizations of Senate Committee on Government Operations held a hearing on Reorganization Plan No. 1 of 1973.

February 26, 1973: Legislation and Military Operations Subcommittee of House Committee on Government Operations held a hearing on Reorganization Plan No. 1 of 1973.

April 4, 1973: In H. Rept. 93–106, the House Committee on Government Operations noted that since a disapproving resolution had not been introduced, it was not required to report for or against Reorganization Plan No. 1 of 1973. However, the Committee came to the conclusion that the Plan should not be opposed, despite the problems and uncertainties regarding its operation.

April 5, 1973: Sixty-day period for Congressional disapproval on Reorganization Plan No. 1 of 1973 ended this date. Plan to go into effect July 1, 1973, as specified therein.

May 14, 1973: Dr. H. Guyford Stever, Director, National Science Foundation, appointed Acting Chairman of the Federal Council for Science and Technology.

June 29, 1973: President Nixon announced the appointment of John A. Love to be an Assistant to the President for Energy and the Director of a new Energy Policy Office to be established in the Executive Office of the President. He also announced the creation of an Energy Research and Development Council, to consist of experts in the field from outside Government, to advise the Energy Policy Office.

The President further proposed the establishment of a new Cabinet-level Department of Energy and Natural Resources and an Energy Research and Development Administration.

July 1, 1973: Reorganization Plan No. 1 of 1973 went into effect.

July 1, 1973: International scientific and technical activities formerly performed by the Office of Science and Technology were transferred to the Director of the National Science Foundation.

July 2, 1973: NSF Director Stever established a Science and Technology Policy Office and named Dr. Russell C. Drew, Director. The Office also provides staff support for the Federal Council for Science and Technology, now chaired by Dr. Stever.

July 5, 1973: House Committee on Science and Astronautics announced plans for a comprehensive inquiry into Federal policy, plans and organization for the support and utilization of science and technology.

July 10, 1973: President Nixon announced the designation of Dr. H. Guyford Stever, Director of the National Science Foundation, as Chairman of the Federal Council for Science and Technology and as Science Adviser to the President. The assignment of these responsibilities was made in a letter of July 1, 1973, from the President to Dr. Stever.

July 17–24, 1973: House Committee on Science and Astronautics held four days of hearings on Federal policy, plans and organization for science and technology, with particular reference to how Reorganization Plan No. 1 of 1973 was being implemented by the Director of the National Science Foundation.

September 10, 1973: In his capacity as Science Adviser, Dr. H. Guyford Stever held the first meeting with representatives of a number of scientific and technical societies to discuss how scientific and technical advice from this community could be brought to the attention of the Federal Government.

September 27, 1973: S. 2495, Technology Resources Survey and Applications Act, introduced by Senators Magnuson, Moss and Tunney. Referred to Committee on Aeronautical and Space Science and Committee on Commerce.

November 7, 1973: In an address to the Nation on the energy emergency, President Nixon requested Congress to act on the proposal for an Energy Research and Development Administration apart from the pending new Department of Energy and Natural Resources proposal.

December 1, 1973: AEC Chairman Dixy Lee Ray presented her findings and recommendations to the President to implement a five-year $10 billion national energy research and development program. One of the recommendations was to establish an operational Energy Research and Development Administration not later than July 1, 1974.

December 4, 1973: OMB Associate Director for Natural Resources, Science, and Energy John C. Sawhill appointed Deputy Director of the newly-created Federal Energy Office in the Executive Office of the President.

January 3, 1974: With the signing of the Supplemental Appropriations Act of 1974 (PL 93–245), a total of $4 million was approved to assist the Director, National Science Foundation to carry out responsibilities as Science Adviser. Included was $2 million to establish an Office of Energy R&D Policy and Science and Technology Policy Office, $1 million to fund grants and contracts to be awarded by the Science and Technology Policy Office, and $1 million for program development and management costs.

January 7, 1974: Former Oak Ridge National Laboratory Director Alvin M. Weinberg was appointed director of R&D policy for the Federal Energy Office in the Executive Office of the President.

January 18, 1974: OMB Director Ash appointed Frank G. Zarb of Huntington, N.Y., as Associate Director for Natural Resources, Energy and Science.

February 1, 1974: The Council of the National Academy of Sciences announced the establishment of an ad hoc committee under the chairmanship of James R. Killian Jr. to look broadly at the relationships between science and technology with a view to assuring the best use of scientific and technical judgments in the development of public policy and in planning and management of Federal research and development. A report is expected within four to six months.

February 4, 1974: The Budget of the U.S. Government for fiscal year 1975 was transmitted to the Congress. The National Science Foundation requested $1.5 million for science and technology policy research, $4.5 million for energy R&D policy research, and $250,000 for consultants' fees and staff and consultant travel for STPO and the Office of Energy R&D Policy.

April 17, 1974: Deputy Treasury Secretary and Federal Energy Office Director William E. Simon was nominated to be Secretary of the Treasury. The White House announced that Mr. Simon would not be designated Assistant to the President for Economic Affairs as was outgoing Treasury Secretary George P. Shultz. It was in this role that Dr. Shultz served as Dr. Stever's channel to the President.

April 30, 1974: William E. Simon was confirmed to be Secretary of the Treasury.

May 2, 1974: Dr. H. Guyford Stever in support of his duties as Science Adviser held the second meeting with representatives of a number of scientific and technical societies to discuss and receive input concerning the societies' actions on the energy problem; definition of and needs for a national science policy; role of scientific and technical societies in providing inputs to government policy decisions; an assessment of major policy issues; and the dissemination of the results of scientific research.

May 7, 1974: Federal Energy Administration was established by P.L. 93–275 as an independent executive agency, replacing the Federal Energy Office in the Executive Office of the President.

June 16, 1974: House Committee on Science and Astronautics announced that the second phase of the committee's inquiry into Federal policy, plans, and organization for science and technology will begin on June 20, 1974, and continue intermittently through July 18.

June 20–July 18, 1974: The House Committee on Science and Astronautics held nine days of hearings on Federal policy, plans, and organization for science and technology. Twenty-six witnesses gave testimony; several other individuals submitted statements for the record.

June 26, 1974: Appearing as a witness before the House Committee on Science and Astronautics, James R. Killian, Jr. presented the findings of the ad hoc Committee on Science and Technology of the National Academy of Sciences on the general question of scientific and technical advice to the government, including the advisory and coordinating functions previously carried out by the White House science advisory complex. The report, entitled "Science and Technology in Presidential Policymaking: A Proposal" recommended the establishment of a Council for Science and Technology as a staff office in the Executive Office of the President.

June 26, 1974: The Chairman of the House Committee on Science and Astronautics directed his staff to begin drafting legislation to improve the advisory, planning, and organizational aspects of Federal science policy.

June 27, 1974: Senators Magnuson, Moss and Tunney introduced an amendment (No. 1537) to S. 2495 which would provide for the establishment of a Council of Advisers on Science and Technology in the Executive Office of the President and the submission of an annual science and technology report.

July 10, 1974: Interim Report of the House Committee on Science and Astronautics, Federal Policy, Plans and Organization for Science and Technology, was published (House Report 93–1184, 93d Congress 2d session).

July 11, 1974: Senate Committee on Commerce and Committee on Aeronautical and Space Sciences held a joint hearing on amendment No. 1537 to S. 2495.

September 18, 1974: Senate Commerce Committee and the Committee on Aeronautical and Space Sciences reported favorably S. 2495, amended, to establish a Council of Advisers on Science and Technology in the Executive Office of the President, and an interagency Federal Coordinating Council on Science and Technology to replace the Federal Council for Science and Technology, and to direct the President to transmit an annual science and technology report to Congress. Referred to Committee on Labor and Public Welfare.

October 8, 1974: Special Subcommittee on National Science Foundation of the Senate Committee on Labor and Public Welfare held a hearing on S. 32, as amended, S. 2495, and S. 1686.

October 9, 1974: Senate Committee on Labor and Public Welfare reported favorably S. 32, with an amendment in the nature of a substitute, incorporating the text of S. 2495 as reported September 18, 1974, amending the National Science Foundation Act of 1950, and providing for State and regional science and technology programs.

October 11, 1974: S. 32 passed the Senate as reported.

October 11, 1974: President Ford signed the Energy Reorganization Act of 1974 (P.L. 93–438)

October 11, 1974: By Executive Order 11814, the Energy Resources Council authorized by P.L. 93–438 was activated, and the Secretary of the Interior was named Chairman. The Council, located in the Executive Office of the President, is charged with developing a single national energy policy and program, and performing such other functions as are assigned to it by the President.

October 15, 1974: S. 32 was referred to the House Committee on Science and Astronautics.

December 21, 1974: President Ford asked Vice President Rockefeller to study the question of whether the system of a White House science adviser should be revived, and if so, in what form, and to report to him his recommendations "in a month or so from now."

December 31, 1974: Federal Nonnuclear Energy Research and Development Act of 1974 (P.L. 93–577) set forth the duties and authorities of the Administrator of the Energy Research and Development Administration, outlined a program of Federal assistance and demonstrations, defined the patent policy for inventions developed under ERDA contracts, and provided for assistance in developing energy-related inventions.

January 15, 1975: S. 32, National Policy and Priorities for Science and Technology Act of 1975, reintroduced by Senator Kennedy et al. Referred to Committees on Labor and Public Welfare, Commerce, and Aeronautical and Space Sciences.

January 15, 1975: S. 79, to establish the United States Science and Technology Board introduced by Senator Mathias. Referred to Committee on Finance.

January 19, 1975: By Executive Order 11834, of January 15, 1975, President Ford directed the activation of the Energy Research and Development Administration and the Nuclear Regulatory Commission, effective January 19, 1975.

March 6, 1975: H.R. 4461, National Science Policy and Organization Act of 1975, introduced by Mr. Teague and Mr. Mosher. Referred jointly to Committees on Science and Technology and Government Operations.

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○

[March 1975]

MARSH REMARKS

RE: Science and Technology Memo

" Option #3 I believe has the potential to achieve the purpose the President and others in the White House seek. An advisor with charter and authority coupled with personal ability can draw on scientific resources in and out of government to present the advice the President needs. I envision an "Alan Greenspan type" who in science gives the advice Alan gives in economics."

[3/6/75]

COMMITTEE ON SCIENCE AND ASTRONAUTICS
HOUSE OF REPRESENTATIVES

Mr. Cannon --

Chairman Teague asked me to deliver this to you. The bill is being introduced today -- primarily for discussion purposes.

regards,

Phil Yeager

COMMITTEE ON SCIENCE AND ASTRONAUTICS
HOUSE OF REPRESENTATIVES

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regards,

Phil Teague

COMMITTEE ON SCIENCE AND TECHNOLOGY
U.S. HOUSE OF REPRESENTATIVES
WASHINGTON, D.C. 20515

PRESS RELEASE

FOR RELEASE: March 6, 1975

Representative Olin E. Teague (D-Tex.), Chairman of the Committee on Science and Technology, today introduced a comprehensive bill to establish a national science policy, provide a system of scientific and technological advice in the Executive Office of the President, and create Cabinet-level support and coordination of Federal R&D activities.

The bill is co-sponsored by Representative Charles A. Mosher (R-Ohio), the Ranking Minority Member of the Committee.

The bill follows a decade of study in the science policy area by Mr. Teague's committee -- and 5 years of subcommittee and full committee focus on the specific issues of science and technology policy, science advisory mechanisms, and organization of R&D activities in the Executive Branch.

The bill's major elements are as follows: (1) a comprehensive statement of national policy for science and technology; (2) a 5-member Council of Advisers on Science and Technology, whose chairman would serve as a science adviser to the President at the option of the President -- but with special built-in discretionary powers as to use and organization vested in the President; (3) the formation of a Department of Research and Technology Operations to provide administrative coordination and supervision of Federal R&D agencies as well as to exert a staff-operation oversight and budget review of all government R&D activities; (4) the consolidation of the various Federal science information agencies into a single government corporation with compatible information handling systems and special ties to the private sector.

Mr. Teague and Mr. Mosher emphasized that the bill is not considered a final product, nor does it represent a fixed position on their part. They added that the bill is not necessarily a reflection of the views of the Committee or of its members. In inviting commentary and criticism, the bill's sponsors indicated that they hoped to discuss the entire issue of science policy advice and planning with appropriate officials in the Executive branch in the near future.

WARREN THESE COPIES WERE SENT TO

JIM CANNON. DID WE ORDER THEM.

Copies sent to
Dunham
Parsons
Schleede

94TH CONGRESS
1ST SESSION

H. R. 4461

IN THE HOUSE OF REPRESENTATIVES

MARCH 6, 1975

Mr. TEAGUE (for himself and Mr. MOSHER) introduced the following bill; which was referred to the Committees on Science and Technology and Government Operations

A BILL

To establish a science and technology policy for the United States, to provide for scientific and technological advice and assistance to the President, to provide adequate administrative organization to assure effective Federal support and utilization of research and development, to amend the National Aeronautics and Space Act of 1958, to amend the National Science Foundation Act of 1950, and for other purposes.

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

SHORT TITLE; TABLE OF CONTENTS

SECTION 1. This Act, with the following table of contents, may be cited as the "National Science Policy and Organization Act of 1975".

TABLE OF CONTENTS

TITLE I—NATIONAL SCIENCE POLICY

FINDINGS

SEC. 101. (a) The Congress hereby finds and declares—

(1) that the general welfare, the economic growth and stability of the Nation and its security, the efficient utilization and conservation of the Nation's resources, and the promotion of the progress of science and the useful arts, upon which the very functioning of government and society depend, require the vigorous and perceptive employment of national science and technology; and

(2) that the complexity and magnitude of scientific and technological factors impinging on the course of national and international events requires that provision be made to incorporate scientific and technological knowledge, selectively, into the national decisionmaking process.

(b) As a consequence, the Congress hereby finds and declares that the Nation's goals for science and technology should include, without being limited to, the following:

(1) demonstrating world leadership by enlarging the contributions of American science and technology to the knowledge of man and his universe;

(2) increasing the efficient use of essential materials and products, and generally contributing to economic opportunity, stability, and appropriate growth;

(3) contributing to the national security;

(4) improving the Nation's health and medical care;

(5) preserving, fostering, and restoring a healthful and esthetic natural environment, housing, and urban systems; and

(6) making the discoveries of science and technology widely available for positive and beneficial use.

DECLARATION OF POLICY

PRINCIPLES

SEC. 102. (a) In view of the foregoing, the Congress declares that it is the policy of the United States to promote the development of a national science policy which comprises the following principles:

(1) the continuing formulation of a national strategy as to the appropriate scope, level, directions, and extent of science and technology efforts, based upon the continuing study of the science and technology goals and policies of the United States while drawing upon the views of States, municipalities, and representative public groups;

(2) the enlistment of science and technology to foster a healthy economy in which the directions of

growth are compatible with the use of resources and with the preservation of a benign environment;

(3) the mobilization of science and technology to further United States diplomatic objectives and assure the adequacy and effective global allocation of raw materials, food, and energy, while maintaining a proper balance, in the development and export of technology, between aid to lagging foreign economies and maintenance of an equitable balance in world trade;

(4) the training and education of adequate number of scientists, engineers, and technologists and insuring their full utilization, including retraining; and

(5) the encouragement of person-to-person and other interchange of scientific information in the national and the world scientific communities.

IMPLEMENTATION

(b) To implement the policy enunciated in subsection (a) of this section, the Congress declares that:

(1) There should be a focal center in the executive branch, to guide executive agencies in mobilizing resources for essential science and technology programs, to present to the Congress the justification of such programs, to secure appropriate funding for those programs, and to systematically review Federal science policy and programs and recommend legislative amend-

ment thereof as appropriate. A major element of this endeavor should be an advisory mechanism within the Executive Office of the President so that the Chief Executive may have available to him independent, expert judgment and assistance on policy matters which require accurate assessments of the complex scientific and technological components involved.

(2) It is a responsibility of the Federal Government to insure prompt, effective, reliable, and systematic transfer of science and technology information by such appropriate methods as the funding of technical evaluation centers, cost-sharing of information dissemination programs conducted by industrial groups and technical societies, and assistance in the publication of properly certified science and technology information. In particular, it is recognized as a responsibility of the Federal Government not only to coordinate and unify its own science information systems, but to facilitate the close coupling of institutional scientific research with industrial application of the useful findings of science.

(3) It is further an appropriate Federal function to support science and technology efforts which are intended to provide results beneficial to the public welfare but which may yield no commercially marketable product.

(4) Science and technology activities which may be properly centralized in the Federal Government should be distinguished from those in which interests are shared with State and local governments and the private sector. Federal preemption of such fields should be avoided by establishing cooperative relationships that enable the sharing of science and technology decisionmaking, funding support, and program planning and execution, among all interested elements of society.

(5) A formal procedure should be developed to determine what level of national effort in science and technology should be sustained, taking into account competing public needs and available resources.

(6) While granting the need for pluralism within and among Federal, State, local, and nongovernmental activities in science and technology, it is essential that means be proportioned to ends in the conduct of national science and technology programs. Such programs should be reviewed by a single technically qualified institution to assure rational allocation of funds and resources, to identify public problems and objectives, to anticipate future concerns to which science and technology can contribute, and to devise strategies for the conduct of science and technology for these purposes.

(7) Comprehensive legislative support for the

national science and technology effort requires that the Congress be regularly informed of the condition, health and vitality, and funding requirements of science and technology, the relation of science and technology to changing national goals, and the need for legislative modification of the Federal science endeavor and structure at all levels.

PROCEDURES

(c) The Congress further declares that, in order to expedite and facilitate the implementation of the policy enunciated in subsection (a) of this section, the following coordinate procedures are of paramount importance;

(1) Federal procurement policy should encourage the use of science and technology to foster frugal use of materials, energy, and environment; to enhance product performance; and to promote economy.

(2) Explicit criteria, including cost-effectiveness principles, should be developed to identify the kinds of science and technology programs that are appropriate for Federal funding support, and to determine the extent of such support. In particular, projects of inherently large or long-term cost should conform with established criteria.

(3) Federal promotion of science and technology

should maximize quality of research, stability of scientific and technological institutions, and, for urgent tasks, timeliness of results. With particular reference to Federal support for basic research, funds should be allocated to encourage education in needed disciplines, to provide a base of scientific knowledge from which future essential technological development can be launched, and to add to the cultural heritage of the Nation.

(4) A uniform patent policy should be promulgated for all Federal agencies, having as its primary objective the full use of beneficial technology to serve the public.

(5) Antitrust regulation to compel competitive economic pluralism should not foreclose cooperation among competing firms in industrial research and development beneficial to an entire industry and to the public.

(6) A closer interrelationship should be encouraged among practitioners of different scientific disciplines.

(7) Federal departments, agencies, and instrumentalities should assure efficient management of laboratory facilities and equipment in their custody, including acquisition of effective equipment, liquidation of inferior and obsolete properties, and cross-servicing to maximize the productivity of costly hardware. Disposal policies

should include attention to arrangements for further productive use.

(8) The full use of the contributions of science and technology to support State and local government goals should be encouraged.

(9) Formal recognition should be accorded those persons whose scientific and technological achievements have contributed significantly to the national welfare.

(10) The Federal Government should support applied scientific research in proportion to its probability of being useful, insofar as this probability can be determined; but while maximizing the beneficial consequences of technology, the Government must act appropriately to minimize foreseeable injurious consequences.

TITLE II—SCIENTIFIC AND TECHNOLOGICAL ADVICE IN THE EXECUTIVE OFFICE OF THE PRESIDENT

CREATION OF COUNCIL OF ADVISERS

SEC. 201. There is created in the Executive Office of the President a Council of Advisers on Science and Technology (hereinafter in this title referred to as the "Council"). The Council shall be composed of five members who shall be appointed by the President, by and with the advice and consent of the Senate, and serve at the

pleasure of the President. Each member shall be exceptionally qualified and distinguished in science, engineering, or closely related fields, or in public administration or affairs, and shall be capable of rendering accurate and comprehensive analysis and critical examination of the programs and activities of the Government in the light of the findings and policies set forth in title I of this Act. The Council shall include members with experience in industry, in academia, and in government. The President shall designate one of the members of the Council as Chairman; and the Chairman shall also serve as a member of the National Security Council.

DUTIES AND FUNCTIONS OF COUNCIL

SEC. 202. It shall be the duty and function of the Council—

(1) to formulate and to submit to the President and to the Congress detailed recommendations on national science and technology policy, priorities, programs, and activities in the light of the findings and policies set forth in title I of this Act;

(2) to submit to the President and the Congress an annual report concerning the status, dispersion, and rate of progress of scientific and technological knowledge in this country in relation to the present and potential

use of such knowledge in specific areas of national concern, and in relation to the status, dispersion, and rate of progress of such knowledge in other countries;

(3) to maintain a liaison with the interagency Federal Council for Science and Technology, with the National Science Board, and with all councils and offices of the Executive Office of the President, and develop a close working relationship with the National Security Council;

(4) to conduct or have conducted long-range study, analysis, and planning, in regard to the application of science and technology to major national problems or concerns;

(5) to evaluate the productivity and effectiveness of the scientific and technological research, development, and technological assessment programs of all Federal departments, agencies, and instrumentalities, and to submit such evaluations to the President together with recommendations for remedial action;

(6) to develop, and to periodically review and revise, a set of standards or criteria for determining the optimum level of science and technology research and development effort by the Federal Government, and of Federal support for science and technology research and

development activities, in accordance with the policies set forth in sections 102 (a) (1) and 102 (b) (5) of title I of this Act; and

(7) to undertake such additional duties and functions as the President may direct.

DUTIES AND FUNCTIONS OF CHAIRMAN

SEC. 203. (a) In addition to his duties and functions under section 202 (and as a member of the National Security Council), the Chairman of the Council shall be available to serve as personal adviser to the President. In this capacity he may—

(1) advise the President with regard to the methodology and operation of specific governmental scientific or technological programs or endeavors;

(2) analyze and examine the relative merits of the scientific and technological alternatives involved in such programs or endeavors;

(3) prepare, or cause to be prepared, and to submit, briefs, memoranda, or other documents or presentations of such scientific, technical, political, or other data as may be useful to the President in making both long-term and short-term or immediate decisions; and

(4) undertake such additional duties and functions as the President may direct.

(b) When called upon to advise the President with

respect to a subject or area within the jurisdiction of the Council as specified in section 202 of this title, the Chairman shall consult with the Council prior to rendering such advice, and shall inform the President of the Council's views with respect to such subject or area.

(c) Upon request of the Chairman of the Council, the head of any Federal department, agency, or instrumentality (including the head of the Department of the Army, Navy, or Air Force) is authorized (1) to furnish to the Chairman such information as may be necessary for carrying out his functions and as may be available to or procurable by such department, agency, or instrumentality, and (2) to detail to temporary duty with the Chairman on a reimbursable basis such personnel within his administrative jurisdiction as he may need or believe to be useful for carrying out his functions. Each such detail shall be without loss of seniority, pay, or other employee status, to civilian employees so detailed, and without loss of status, rank, office, or grade, or of any emolument, perquisite, right, privilege, or benefit incident thereto, to military personnel so detailed. Each such detail shall be pursuant to a cooperative agreement of the Chairman with the head of relevant department, agency, or instrumentality.

STAFFING

SEC. 204. The Chairman is authorized to select, appoint, and employ, and fix the compensation of, such specialists

and other experts as may be necessary for the carrying out of the duties and functions of the Council and of the Chairman, without regard to the civil service laws, and is authorized to select, appoint, and employ, subject to the civil service laws, such other officers and employees as may be necessary for carrying out the duties and functions of the Council and of the Chairman.

REORGANIZATIONS

SEC. 205. (a) The President shall from time to time examine the organization of the Council and shall determine what changes, if any, are necessary to reduce expenditures and promote economy and efficiency; and to increase the Council's and the Chairman's capacity to render their analyses, examinations, advice, and counsel, by reduction or increase in the number of members on such Council or by reduction, expansion, or alteration of the duties and functions of the Council or of its Chairman. When the President, after investigation, finds that any of such changes would promote the policies and purposes of this Act, he may prepare a reorganization plan for effecting the change or changes involved, and submit such plan to the Congress, together with his findings and a statement of reasons for the proposed change or changes, and shall have any such reorganization plan delivered to both Houses on the same day and to each House while it is in session.

(b) A provision contained in a reorganization plan shall take effect at the end of the first period of sixty calendar days of continuous session of Congress after such plan is transmitted to it (such days of continuous session to be computed in accordance with section 906(b) of title 5, United States Code) unless, between the date of transmittal and the end of the sixty-day period, each House has passed a resolution stating in substance that that House does not favor the reorganization plan. However, no such plan shall take effect unless it is submitted to Congress before January 3, 1980.

(c) The provisions of sections 908 through 913 of title 5, United States Code, shall apply with respect to any reorganization plan transmitted to the Congress pursuant to subsection (a) of this section.

(d) A reorganization plan which is effective shall be printed (1) in the Statutes at Large in the same volume as the public laws, and (2) in the Federal Register.

AUTHORIZATION

SEC. 206. There are authorized to be appropriated for fiscal year 1976 and thereafter such sums as may be necessary to carry out the purposes of this title.

TITLE III—DEPARTMENT OF RESEARCH AND TECHNOLOGY OPERATIONS

ESTABLISHMENT; SECRETARY; DEPUTY SECRETARY

SEC. 301. (a) There is established in the executive branch a department to be known as the Department of Research and Technology Operations (hereinafter in this title referred to as the "Department"). There shall be at the head of the Department a Secretary (hereinafter in this title referred to as the "Secretary"), and a Deputy Secretary, each of whom shall be appointed by the President, by and with the advice and consent of the Senate. The Deputy Secretary shall act for, and exercise the powers of, the Secretary during the absence or disability of the Secretary or in the event of a vacancy in the office of Secretary.

(b) The Secretary shall receive basic pay at the rate provided for level I of the Executive Schedule under section 5312 of title 5, United States Code. The Deputy Secretary shall receive basic pay at the rate provided for level II of the Executive Schedule under section 5313 of such title.

PURPOSE AND FUNCTION

SEC. 302. It shall be the purpose and function of the Department—

(1) to provide a centralized administrative resource to certain key agencies and instrumentalities of the Federal Government whose primary mission is scientific or technical research and development, as specified in section 303;

(2) to assist those agencies and instrumentalities in improving the coordination and interaction of their respective current programs and activities;

(3) to serve as the organizational repository for any major new national scientific or technological research or development programs not within the jurisdiction of those key agencies and instrumentalities or of other Federal departments, agencies, or instrumentalities;

(4) to promote, in accordance with the provisions of title I, such technology assessment activities as the Secretary determines to be appropriate, and, upon request, to assist all Federal agencies and instrumentalities in the conduct of such assessment activities;

(5) to provide, insofar as is practicable with the resources allocated to it, all Federal departments, agencies, and instrumentalities with such scientific and technical knowledge, information, expertise, research facilities, or management as they may request, such facilities and services to be provided on a reimbursable basis where and to the extent it is practicable and reasonable;

(6) to provide to the President and the Congress an annual review of Federal statutes governing the departments, agencies, and instrumentalities charged with conducting scientific and technological research and development (including those administratively located within the Department) for the purpose of proposing the elimination of actually or potentially redundant, obsolescent, or inefficient programs or activities, or of advancing previously neglected or omitted fields or areas of endeavor;

(7) to provide to the President and the Congress an annual review of the administrative regulations of all those Federal departments, agencies, and instrumentalities (including those administratively located within the Department) which, on more than an incidental basis, contract with private organizations for scientific or technical research or development, such review to be for the purpose of proposing the elimination or alteration of those regulations which are redundant, obsolescent, inefficient or inadequate, or for the purpose of proposing additional regulations;

(8) to provide to the Office of Management and Budget an annual review of, and recommendations regarding, the proposed scientific or technical research or development budgets of all Federal departments,

agencies, and instrumentalities (including those administratively located within the Department), such review to be provided prior to the inclusion by the Office of such research and development budgets in the Federal budget, and such recommendations to be made only after consultation with the Council of Advisers on Science and Technology.

ORGANIZATIONAL TRANSFER

SEC. 303. (a) The following governmental agencies and instrumentalities shall be administratively located within the Department, subject to the limitations and restrictions specified in subsection (b):

(1) the National Aeronautics and Space Administration;

(2) the Energy Research and Development Administration;

(3) the National Bureau of Standards;

(4) the National Science Foundation;

(5) the National Oceanic and Atmospheric Administration; and

(6) the Science and Technology Information Utilization Corporation.

(b) Notwithstanding the organizational transfer to the Department of the agencies and instrumentalities named in subsection (a), such agencies and instrumentalities

shall, under the general supervision and direction of the Secretary, operate in an independent manner in the conduct of their various programs and activities, subject to the specific limitation on budgetary authority provided under sections 302(8), 304(6), and 306. The basic mission and purpose of each such agency or instrumentality shall not be modified or abridged as a result of its organizational transfer to the Department in any manner other than as specifically provided by this Act.

(c) The functions, personnel, property, records, and unexpended balances of appropriations, allocations, and other funds employed, used, held, available or to be made available in connection with the functions of the agencies and instrumentalities specified in subsection (a) shall not be transferred to the Secretary, but shall remain in those agencies and instrumentalities.

DUTIES AND FUNCTIONS OF THE SECRETARY

SEC. 304. It shall be the duty and function of the Secretary—

(1) to continuously review the requirements of the agencies and instrumentalities specified in section 303 (a) for centralized administrative, clerical, legal, legislative or executive liaison, computer, or other services, and to develop, maintain, and administer such services;

(2) to convene at regular intervals meetings of the

chief officers of the agencies and instrumentalities specified in section 303 (a), or of representatives selected by those officers, to examine the potential for expanding the interaction and cooperation of those agencies and instrumentalities in pursuing their various objectives, functions, programs, and activities;

(3) to promote and undertake such scientific and technological research and development objectives, functions, programs, and activities, not within the present purview of the agencies and instrumentalities specified in section 303 (a), as may be hereafter adopted or created by statute, order, regulation, proclamation, or directive, and placed within his jurisdiction;

(4) to compile, publish, and distribute to other Federal departments, agencies, and instrumentalities such scientific and technical data as becomes available to him, and to provide, in return for the transfer of funds, appropriations, allocations, or other credits, the services of such experts, consultants, research facilities, or contractors as he may employ, manage, or direct;

(5) to direct, manage, and control the production, publication, and submission of the annual reviews described in sections 302 (6) and 302 (7);

(6) to promulgate, after consultation with the Federal Council of Science and Technology, rules

governing the definition of scientific or technological research or development expenditures and the submission for review of proposed scientific or technological research or development budgets of all Federal departments, agencies, and instrumentalities (including those administratively located within the Department), and to direct, manage, and control the production, publication, and submission of the annual review of, and recommendations regarding, those budgets as described in section 302 (8);

(7) to report annually in writing to the appropriate committees of the Congress on personnel detailed to the Department pursuant to section 305 (b), and

(8) to exercise leadership, under the direction of the President, in matters of scientific and technological research, and to undertake such additional duties and functions as the President may direct in furtherance of the policies, purposes and goals set forth in title I of this Act.

AUTHORITY OF THE SECRETARY

SEC. 305. (a) In addition to the authority contained in section 304, the Secretary is authorized—

(1) to select, appoint, employ, and fix the compensation of such specialists and other experts as may be

necessary for the carrying out of his duties and functions, and to select, appoint, and employ, subject to the civil service laws, such other officers and employees as may be necessary for carrying out his duties and functions;

(2) to obtain services as authorized by section 3109 of title 5, but at rates not to exceed $100 per diem for individuals unless otherwise specified in an appropriation Act;

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

(4) to delegate any of his functions, powers, and duties to such officers and employees of the Department as he may designate; to authorize such successive redelegations of such functions, powers, and duties as he may deem desirable; and to make such rules and regulations as may be necessary to carry out such functions, powers, and duties, and to insure the propriety and effectiveness of such delegations and redelegations;

(5) to establish a working capital fund, to be available without fiscal year limitation, for expenses necessary for the maintenance and operation of such centralized administrative services as he shall find desirable in

the interest of economy and efficiency in the Department, and for such items as office equipment, supplies, stationery, copying equipment, graphics, office space, central messenger, mail, and telephone and other communications services;

(6) to cause a seal of office to be made for the Department of such device as he shall approve; and judicial notice shall be taken of such seal;

(7) to provide or contract for or maintain the following for employees and their dependents stationed at remote localities:

(A) emergency medical services and supplies;

(B) subsistence supplies; and

(C) lodging, working, messing, and recreational facilities,

such services, supplies, and facilities to be furnished at a price reflecting reasonable value, with the proceeds being credited to the appropriation from which the expenditure was made;

(8) to accept and utilize voluntary and uncompensated services, and accept, hold, administer, and utilize gifts and bequests of real or personal property, for the purpose of aiding or facilitating the work of the

Department; such gifts, bequests, and the proceeds thereof to be—

(A) used as nearly as possible in accordance with the terms of the gift or bequest;

(B) considered as gifts or bequests to or for the use of the United States for the purpose of Federal income, estate, and gift taxes;

(C) deposited in the Treasury of the United States in a separate fund, if in the form of money or if reduced to such form by sale, and disbursed upon order of the Secretary; and

(D) upon request of the Secretary, invested or reinvested by the Secretary of the Treasury in securities of the United States or in securities guaranteed as to principal and interest by the United States (the income of such securities being deposited to the credit of such separate fund and disbursed upon order of the Secretary);

(9) to appoint, without regard to the civil service laws and in conformity with the provisions of the Federal Advisory Committee Act (86 Stat. 770), such advisory committees as shall be appropriate for the purpose of consultation with and advice to the Department in the performance of its functions, and to compensate the

members of such committees in accordance with the limitations contained in section 7 of such Act, or in regulations promulgated thereunder; and

(10) to enter into contracts for the conduct of scientific or technological research, upon a determination by the Secretary in each case that the contractor is capable of performing such research efficiently and effectively, and to supervise, manage, and review the success of such research.

(b) Upon request of the Secretary, the head of any Federal department, agency, or instrumentality (including the head of the Department of the Army, Navy, or Air Force) is authorized (1) to furnish to the Department such information as may be necessary for carrying out its functions and as may be available to or procurable by such department, agency, or instrumentality, and (2) to detail to temporary duty within the Department on a reimbursable basis such personnel within his administrative jurisdiction as it may need or believe to be useful for carrying out its functions. Each such detail shall be without loss of seniority, pay, or other employee status, to civilian employees so detailed, and without loss of status, rank, office, or grade, or of any emolument, perquisite, right, privilege, or benefit incident thereto, to military personnel so de-

tailed. Each such detail shall be pursuant to a cooperative agreement of the Secretary with the head of the relevant department, agency, or instrumentality.

STATUS OF BUDGET RECOMMENDATIONS

SEC. 306. The Director of the Office of Management and Budget shall take no action on any budget request contrary to a recommendation of the Secretary, made as a result of a review conducted pursuant to sections 302 (8) and 304 (6), without first providing the Secretary adequate opportunity to present the facts and reasons upon which such recommendation is based. In the event that the Director determines, after such presentation, to take an action contrary to the recommendation of the Secretary, the recommendation of the Secretary, the decision of the Director, and an explanation of that decision prepared by the Director shall be included in the explanatory materials submitted to Congress with such budget request.

AUTHORIZATION

SEC. 307. There are authorized to be appropriated for the fiscal year 1976, and for each succeeding fiscal year, such sums as may be necessary to carry out this title.

TITLE IV—SCIENCE AND TECHNOLOGY INFORMATION AND UTILIZATION CORPORATION

ESTABLISHMENT AND PURPOSE

SEC. 401. (a) There is established in the executive branch of the Government an independent agency to be known as the Science and Technology Information and Utilization Corporation (hereinafter in this title referred to as the "Corporation"). The Corporation shall consist of a Science and Technology Information and Utilization Board and an Executive Director.

(b) The purpose and mission of the Corporation shall be to (1) assure the widest possible dissemination of scientific and technological information to industry, labor, the academic community, State and local governments, and to the public at large, and (2) coordinate, collate, publish, arrange, and manage such information so that it is readily available in effective form at the least feasible cost to the user.

SCIENCE AND TECHNOLOGY INFORMATION AND UTILIZATION BOARD

SEC. 402. (a) The Science and Technology Information and Utilization Board (hereinafter in this title referred to as

the "Board") shall consist of nine members appointed by the President by and with the advice and consent of the Senate. The members of the Board shall be selected from among the citizens of the United States and shall include three eminent and distinguished persons from each of the fields of government, industry, and academia. Members of the Board shall biannually select one of their number to serve as Chairman.

(b) The term of office of each member of the Board shall be six years; except that (1) any member appointed to fill a vacancy occurring prior to the expiration of the term for which his predecessor was appointed shall be appointed for the remainder of such term; and (2) the terms of office of members first taking office shall begin on the first day on which the appointment of any such member is confirmed by the Senate and shall expire, as designated at the time of their appointment, one from each of the three fields at the end of two years, one from each of the three fields at the end of four years, and one from each of the three fields at the end of six years. No member shall be eligible to serve in excess of two consecutive terms of six years each. Notwithstanding the preceding provisions of this subsection, a member whose term has expired may serve until his successor has qualified. Any vacancy in the Board

shall not affect its power, but shall be filled in the manner in which the original appointment was made.

(c) The members of the Board shall, while attending meetings of the Board or while engaged in duties related to such meetings or in other activities of the Board pursuant to this Act, be entitled to compensation at the rate of $100 per day including traveltime, and while away from their homes or regular places of business they may be allowed travel expenses, including per diem in lieu of subsistence, equal to that authorized by law (5 U.S.C. 5703) for persons in the Government service employed intermittently.

(d) The Board shall meet at least once every other month and shall provide counsel, advice, and direction to the Executive Director in matters of policy, long-term goals, and such other matters as the Executive Director may bring to their attention. The Board members shall seek to promote the interaction and cooperation of the Corporation with industry, business, academia, and other branches and levels of Government, shall review the budget recommendations of the Executive Director, and shall perform such other duties and functions as the President may direct.

EXECUTIVE DIRECTOR OF THE CORPORATION

SEC. 403. (a) The Executive Director shall be appointed by the President, after consideration of such sug-

gestions as the Board may make, by and with the advice and consent of the Senate, and shall serve at the pleasure of the President.

(b) The Director shall receive compensation at the rate provided for level III of the Executive Schedule in section 5314 of title 5, United States Code.

(c) The Executive Director is authorized to appoint a Deputy Director, who shall receive compensation at the rate provided for level V of the Executive Schedule in section 5316 of title 5, United States Code.

CORPORATION POWERS AND FUNCTIONS

SEC. 404. The Corporation is authorized and directed, through its Executive Director—

(1) to select, appoint, and employ, subject to the civil service laws, not to exceed twenty staff members, including clerical staff;

(2) to oversee, manage, direct, and coordinate the operations of the entities transferred to the Corporation by section 405;

(3) to review the operations, functions, programs, activities, budgets, personnel, and organizational structures of those entities, and to recommend to the President such alteration, amendment, consolidation, expansion, or elimination of the programs, activities, functions, powers or duties of those entities, by statute or otherwise, as will

promote the efficiency and effectiveness of those entities and of the Corporation;

(5) to formulate a compatible and comprehensive system or systems for processing, storing, communicating, distributing, and disseminating scientific and technical data, information, theories, and experimental methods and results, which system or systems shall, upon approval by the President, be uniformly adopted and utilized throughout the executive branch of the Government;

(6) to promote and establish intensive and extensive interaction between the Corporation and appropriate industrial, business, academic, and governmental organizations in order to develop more efficient and orderly processes of dissemination and utilization of scientific and technical data, information, theories, and experimental methods and results;

(7) to promote and establish an ongoing and effective liaison with the National Referral Center for Science and Technology of the Library of Congress, and to recommend to the President such measures as will increase and improve the interaction and cooperation of the Corporation with such Center, where and to the extent feasible;

(8) to engage in specific programs of dissemina-

tion of information in order to accelerate and promote the utilization of important scientific or technical advances in areas of national economic, social, or political concern or crisis;

(9) to develop channels of communication with State and local governments, other Federal agencies, and private institutions, for use in conjunction with such specific dissemination programs;

(10) to contract with private persons for such services, supplies, data, equipment, and other assistance as it may require in the performance of any of the programs or activities specified by this section; and

(11) to perform such other duties and functions as the President may direct.

TRANSFER OF FUNCTIONS

SEC. 405. (a) The following entities are hereby transferred to the Corporation:

(1) the National Technical Information Service of the Department of Commerce;

(2) the Science Information Exchange, Incorporated, of the Smithsonian Institution;

(3) the Science Information Service of the National Science Foundation; and

(4) the Science Information Council of the National Science Foundation.

(b) There are hereby transferred to and vested in the Executive Director all the functions, powers, and duties—

(1) of the Secretary of Commerce under the Act of September 9, 1950, as amended;

(2) of the Secretary of the Smithsonian Institution with respect to the Smithsonian Science Information Exchange, Incorporated, a wholly controlled nonprofit corporation; and

(3) of the National Science Foundation under sections 901 through 904 of the National Defense Education Act of 1958 (42 U.S.C. 1876–1879).

(c) The personnel, assets, liabilities, contracts, property, and records of, and unexpended balances of appropriations, authorizations, and allocations to and other funds employed, held, or used by, arising from, available to, or to be made available to, the entities specified in subsection (a) of this section as a consequence of their inclusion in, or interaction with, the Department of Commerce, the Smithsonian Institution, or the National Science Foundation, are hereby transferred to the Corporation. The Executive Director shall assign such personnel, assets, liabilities, contracts, property, records, balances, and funds to the entity from which it was transferred, for use in carrying out the functions, duties, and powers vested by this section

in the Corporation and the Executive Director, where and to the extent feasible.

(d) The Secretary of the Smithsonian Institution shall take all actions within his power as are necessary to attain the purposes of this section with regard to the transfer of the Smithsonian Science Information Exchange, Incorporated, including negotiation or direction of amendment of the articles of incorporation, bylaws, contracts, and other instruments.

AUTHORIZATION

SEC. 406. There are authorized to be appropriated for the fiscal year 1976, and for each succeeding fiscal year, such sums as may be necessary to carry out this title.

TITLE V—MISCELLANEOUS AND TECHNICAL

SEC. 501. The National Science Foundation Act of 1950 (42 U.S.C. 1861 et seq.) is amended—

(1) by inserting after "Director" in section 2 the following: "and shall be administratively located in the Department of Research and Technology Operations, as provided in the National Science Policy and Organization Act of 1975"; and

(2) by striking out subsection 4(g) and by redesignating subsections 4 (h), (i), and (j) as subsections 4 (g), (h), and (i), respectively.

SEC. 502. Section 902 of the National Defense Education Act of 1958 (42 U.S.C. 1877) is amended—

(1) by inserting after "Department of Agriculture library," in subsection (a) the following: "the director of the National Technical Information Service, the president of the Smithsonian Science Information Exchange, Incorporated,";

(2) by striking out "appointed by the Director of the National Science Foundation" in subsection (a) and inserting in lieu thereof "appointed by the Chairmen of the Board of the Science and Technology Information and Utilization Corporation";

(3) by striking out "the head of the Science Information Service" in subsection (b) and inserting in lieu thereof "the Board of the Science and Technology Information and Utilization Corporation"; and

(4) by striking out "the National Science Foundation" in subsection (c) and inserting in lieu thereof "the Chairman of the Board of the Science and Technology Information and Utilization Corporation".

SEC. 503. Section 2 of Reorganization Plan Numbered 1 of 1973, transmitted to the Senate and House of Representatives in Congress assembled, January 26, 1973, pursuant to the provisions of chapter 9 of title 5 of the United States Code, is repealed.

SEC. 504. Section 202 (a) of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2472 (a)) is amended by inserting after "(hereinafter called the 'Administration')" the following: "which shall be administratively located in the Department of Research and Technology Operations, as provided in the National Science Policy and Organization Act of 1975".

SEC. 505. (a) The Act of March 3, 1901 (15 U.S.C. 271 et seq.) is amended—

(1) by striking out "Secretary of Commerce" in sections 2 and 16 and inserting in lieu thereof "Director of the National Bureau of Standards";

(2) by striking out "referred to as the 'Secretary'" in sections 2 and 16, and inserting in lieu thereof "referred to as the 'Director'";

(3) by striking out "in this section, Secretary is authorized" in section 2 and inserting in lieu thereof "in this section, Director is authorized";

(4) by striking out "Secretary of Commerce" in section 5 and inserting in lieu thereof "Secretary of Research and Technology Operations";

(5) by striking out "Secretary of Commerce" wherever it appears in sections 6, 9, 10, and 13 through 15, and inserting in lieu thereof "Director";

(6) by striking out "Secretary" wherever it appears in sections 7 and 17 and inserting in lieu thereof "Director"; and

(7) by striking out "Department of Commerce" in sections 8 and 12 and inserting in lieu thereof "National Bureau of Standards".

(b) The Act of March 4, 1911 (15 U.S.C. 279), is amended by striking out "Secretary of Commerce" in section 1 and inserting in lieu thereof "Secretary of Research and Technology Operations".

(c) Section 1 of the Act of May 14, 1930 (15 U.S.C. 282), is amended by striking out "of the Department of Commerce".

SEC. 506. Section 101 of the National Security Act of 1947 (50 U.S.C. 402) is amended by redesignating paragraphs (5), (6), and (7) as paragraphs (6), (7), and (8), respectively, and inserting after paragraph (4) the following:

"(5) the Chairman of the Council of Advisers on Science and Technology;".

SEC. 507. The Chairman of the Council of Advisers on Science and Technology, the Secretary of the Department of Research and Technology Operations, and the Executive Director of the Science and Technology Information and Utilization Corporation, shall, within six months of the date of enactment of this Act, each submit to the

President for prompt transmission to the Congress, draft legislation of such technical and conforming amendments as may be necessary to reflect the organizational and substantive changes sought to be effected by this Act with regard to their respective organizations or jurisdictions, including any provisions which may be necessary to assure an orderly transition from existing programs or organizations to the new or modified programs or organizations established by this Act.

94TH CONGRESS
1ST SESSION

H. R. 4461

A BILL

To establish a science and technology policy for the United States, to provide for scientific and technological advice and assistance to the President, to provide adequate administrative organization to assure effective Federal support and utilization of research and development, to amend the National Aeronautics and Space Act of 1958, to amend the National Science Foundation Act of 1950, and for other purposes.

By Mr. TEAGUE and Mr. MOSHER

MARCH 6, 1975

Referred to the Committees on Science and Technology and Government Operations

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

MAR 7 1975

MEMORANDUM FOR: JIM CANNON

FROM: Paul O'Neill

SUBJECT: Science Advisory Options Memorandum from the Vice President

I have reviewed the draft memorandum to the President concerning the reestablishment of a science advisory apparatus in the Executive Office of the President.

I am concerned that the problem statement does not seem to be related to the arguments presented for the three options. The only motivation given in the description of the problem is one of the constituent pressure by the scientific community. If that is the only problem we are concerned with, then it seems to me the options should be measured by that criterion and by that criterion alone. If on the other hand, we want to assert that there is a substantive problem as well, we should specify the problem as clearly as possible (with examples, perhaps) and show how each option would help to solve the "problem."

Second, I believe the range of options in the draft could be usefully expanded. Options 1 and 2 are virtually identical except for the multi-headed nature of the Council described in option 1 and the difference in funding for contractor and consultant support (i.e., $1.0-1.5 vs. $2.5-5 million). Beyond this, no options are presented which either strengthen or build upon the present apparatus or which might seek to integrate a science advisory apparatus into an existing Executive Office organization (the Domestic Council).

Third, I am concerned about the way some of the arguments for and against each of the options is presented. For example, it seems to me, use of such descriptions as "tremendously useful" and such judgmental terms as "unduly" belong in a recommendation section of the paper so that, as nearly as possible, we separate value judgments from facts.

Furthermore, the arguments are not presented consistently from one option to another. Specifically, all the arguments

cited for and against option 1 are equally valid for option 2. For example, the need for congressional action for implementation is cited as an argument against option 2 although it is also true for option 1. Also, the argument of difficulty of integration of science advice in broader policy issues and the susceptibility to "politization," which are cited as arguments against option 1, are equally valid arguments against option 2.

In sum, it is my view that the options paper put together a few weeks ago (see copy attached) was extremely well done and balanced. I would recommend strongly that you replace the options section of the present memorandum with something close to that version. I would be happy to discuss.

Attachment

THE WHITE HOUSE

WASHINGTON

March 7, 1975

MEMORANDUM FOR: JIM CANNON

FROM: PHILIP BUCHEN P.W.B.

Attached is a draft of a fourth option that I believe should be included in the proposed memo to the President.

As the memo is presently drawn, the argument against option 3 is that the approach would not satisfy either the scientific community or the Congress, and if your argument is valid it would apply even more strongly to the proposed option 4. However, I believe there are many scientists who would find both option 3 and the proposed option 4 acceptable, but I have no opinion of what it will take to foreclose stronger Congressional action.

Attachment

cc: Don Rumsfeld
Jim Lynn
Jack Marsh

DRAFT

OPTION 4. APPOINTMENT OF A SCIENTIFIC AND TECHNOLOGY LIAISON ADVISER TO THE PRESIDENT

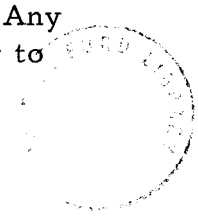
This would be an administrative action. It differs in concept from Options 1-3 in that it does not purport to establish a substantive adviser. His purpose would be to serve as a point of contact, and to transmit and interpret the views of the scientific community to the President.

ARGUMENTS FOR:

-- The subject matter of science and technology is much too diverse to make feasible a substantive advisory role with anything less than the kind of staff indicated by Option 1. The alternative is an operation similar in concept to Bill Baroody's -- a White House staff contact that assures access by the scientific community and an interpreter to facilitate communication.

-- Substantive advice on scientific and technical matters, to the extent that it is needed for Presidential decisions, is normally provided through the expertise of the departments and agencies. If there is a need on occasion for an additional viewpoint, the need is to bring the appropriate outside adviser to the President -- not to formulate an in-house White House position on the subject.

-- There are substantial institutions in government now that are dedicated to scientific matters. To some extent they have their own viewpoints that should be filtered through a more objective source in the White House. But, as for other White House offices, the purpose should not be to duplicate the agency's function. Any staff capable of generating its own views is likely to grow toward such a "super" role.



-- The function of the office would be clearly depicted as representational. Options 2 and 3, in contrast, are neither fish nor fowl. They purport to be a substantive advisory apparatus, but without the staff needed to accomplish that purpose.

-- The White House staff increase would be minimal.

ARGUMENTS AGAINST

-- This probably would not satisfy many in the scientific community and may not offset stronger Congressional action.

-- The President would not have the advice of a qualified scientific panel responsible solely to him.

Phil Yeager

3/10/75

Study and discussion

would be up to -5

~~[illegible]~~

$

No dollar figure

~~go [illegible]~~

in [illegible] office

not committed to Kennedy –

hearings = mid – April
at the earliest !!

(Steen / Wolden) O.E.P. (energy conservation

O.E.P.

Killian — link to scientific establishment.

Weisner — "What is a radio wave"
JFK eyes glaze over

President's Scientific Advisory Committee

W. H. Bureaucracy did better than PSAC.

PSAC

Compromise w/ scientific

not personally concerned it served the country.

Henry Simons. 3/

Killian - showed signs of activity.

Weisner - advised on space program opposed Apollo.

Scientific Advisory Team cracked up for political reasons.

Pres Eisenhower,

Dr James Killian - reforms -

(scientific education & training

Space power

preliminary strategy for U.S.

exploration of space

Authorized Approved - Ed Welsh

Ed Welsh

Dr Jerome Weisner