

The original documents are located in Box 17, folder “12/31/74 S1283 Federal Nonnuclear Energy Research and Development Act of 1974 (1)” of the White House Records Office: Legislation Case Files at the Gerald R. Ford Presidential Library.

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APPROVED
DEC 31 1974

THE WHITE HOUSE
WASHINGTON

ACTION

Last Day: December 31

December 28, 1974

To: Sen Colorado 1/1/75

*To: ARCHIVES
1/3/75*

MEMORANDUM FOR THE PRESIDENT
FROM: KEN COLE
SUBJECT: Enrolled Bill S. 1283 - Federal Nonnuclear Energy Research and Development Act of 1974

Attached for your consideration is S. 1283, sponsored by Senator Jackson and 27 others, which directs the Energy Research and Development Administration to:

- formulate and carry out a comprehensive program of research and development covering all energy sources except nuclear; and
- to pursue appropriate demonstration projects and to encourage the application of Government-sponsored energy inventions through licensing.

The bill also authorizes the President to allocate critical materials needed for energy reserach and development.

OMB recommends approval and provides additional background information in its enrolled bill report (Tab A).

Max Friedersdorf and Phil Areeda both recommend approval.

RECOMMENDATION

That you sign S. 1283 (Tab B).





EXECUTIVE OFFICE OF THE PRESIDENT

OFFICE OF MANAGEMENT AND BUDGET

WASHINGTON, D.C. 20503

DEC 26 1974

MEMORANDUM FOR THE PRESIDENT

Subject: Enrolled Bill S. 1283 - "Federal Nonnuclear
Energy Research and Development Act of 1974"
Sponsor - Sen. Jackson (D) Washington and 27 others

Last Day for Action

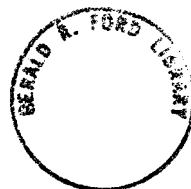
December 31, 1974 - Tuesday

Purpose

Directs the Energy Research and Development Administration to formulate and carry out a comprehensive program of research and development covering all energy sources except nuclear, to pursue appropriate demonstration projects, and to encourage the application of Government-sponsored energy inventions through licensing; authorizes the President to allocate critical materials needed for energy research and development; and for other purposes.

Agency Recommendations

| | |
|---|---------------------------|
| Office of Management and Budget | Approval |
| Atomic Energy Commission | Approval (Informally) |
| Federal Energy Administration | Approval (Informally) |
| Department of the Interior | Approval |
| Department of Commerce | Approval (Informally) |
| Environmental Protection Agency | Approval (Informally) |
| Council on Environmental Quality | Approval |
| Water Resources Council | Approval |
| National Aeronautics and Space Administration | No objection (Informally) |
| National Science Foundation | No objection |
| Department of Justice | No objection |
| Department of Transportation | No objection (Informally) |
| Department of the Treasury | No objection (Informally) |
| Department of Defense | No objection (Informally) |
| Department of Housing and Urban Development | No objection (Informally) |
| Federal Power Commission | No objection (Informally) |
| General Services Administration | No objection |



Discussion

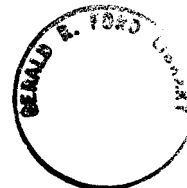
Over the long term, achieving the capability for energy self-sufficiency will require development of a broad range of energy technologies. The Administration and the Congress have recognized this need by including more than \$2 billion in the fiscal 1975 budget for energy research and development and by creating the Energy Research and Development Administration (ERDA), which will begin operating by mid-January.

ERDA's responsibilities with regard to nuclear energy will be governed by the provisions of the Atomic Energy Act, while the enrolled bill would provide overall guidelines and direction for ERDA's nonnuclear programs. In general, S. 1283 incorporates rather than supersedes previously enacted ERDA authorities such as those contained in the solar and geothermal energy bills which you approved earlier this year.

ERDA Program. The enrolled bill would direct the Administrator to submit to the Congress by June 30, 1975, and update annually, a comprehensive report detailing the plan and program then in effect for developing and demonstrating various nonnuclear energy technologies, including synthetic fuels, solar and geothermal power, advanced electrical generation and transmission, new designs for automotive engines, and techniques for recycling of energy and materials.

Principles. In designing and executing the program, the Administrator is to be guided by a number of governing principles enunciated in the bill. Among other things, these require analysis of social and environmental consequences, strong attention to energy conservation and water consumption, emphasis on methods of using renewable or essentially inexhaustible energy sources, and the degree to which non-Federal entities could achieve comparable results in a timely manner.

Federal Assistance. To carry out the program, S. 1283 would authorize the Administrator to employ various forms of Federal assistance, including contracts and loans. The bill sets out detailed criteria for two types of assistance -- joint



Federal-industry corporations and guaranteed prices or purchases of the products of demonstration facilities -- but specifies that these cannot be employed without additional authorizing legislation. The Administrator must obtain specific authorization from Congress to build demonstration plants for which the Federal share of the construction cost is expected to exceed \$50 million. Further, if the Federal share of construction costs is expected to be more than \$25 million, funds could not be spent until an ERDA report on the project has been before the Congress for 60 days.

Patents and Licensing. S. 1283 includes extensive provisions regarding the policies to be followed in granting patents and licenses for inventions developed under ERDA contracts. In general, they provide for the Government to retain title and for licenses to be granted on a nonexclusive basis, but the bill also contains explicit authority for the Administrator to grant waivers and exclusive or partially exclusive licenses that conform with specified minimum considerations. In addition, the bill requires submission of a report to Congress within 12 months on the need, if any, for changes in these patent and licensing provisions.

Environmental Effects. Three provisions of the bill are directed at evaluating the potential effects of energy research and development projects on the environment. The Council on Environmental Quality is directed to carry out a continuing analysis of environmental consequences, the Water Resources Council is authorized (at ERDA request) to assess the availability of water for any energy technology or project, and the Environmental Protection Agency is directed to monitor the construction of any demonstration facility to insure that it meets environmental requirements.

Materials Allocation. Finally, the enrolled bill would authorize the President to allocate any materials and equipment that he finds "scarce, critical and essential to carry out the purposes of (the) Act" but which "cannot reasonably be obtained" without mandatory allocation. Any rule or order requiring such allocation would take effect 30 days after submission to the Congress, unless either House passed a resolution disapproving it. This provision is comparable to other one-House veto provisions which Justice has found constitutionally objectionable, but which have been included in several bills enacted and approved in recent months.



Authorization of Appropriations. Notwithstanding a statement of congressional findings that the Nation's energy challenge will require a total Federal investment of over \$20 billion in the next decade, the bill contains no authorization for funding, but states that "There may be appropriated...such sums as may be authorized in annual authorization acts." Funds to carry out the bill's provisions for the remainder of fiscal year 1975 have already been appropriated under authorization contained in the ERDA Act and other legislation such as the solar and geothermal Acts previously mentioned.

OMB Comment

We and the other key agencies involved in energy matters feel that this is a worthwhile piece of legislation that merits your approval. The bill provides some new authorities, notably in the areas of patents, licensing, and Federal assistance, which should prove valuable to ERDA in carrying out the nonnuclear programs and in securing private sector cooperation. The various provisions of the bill also contain sufficient flexibility so as not to unduly constrain ERDA in the performance of its duties. Although it was not an Administration bill, as a result of successful cooperative efforts between the staffs of OMB and other agencies and staffs of several committees, the bill does provide a useful framework for the effective implementation of ERDA's non-nuclear programs.


Acting Director

Enclosures



UNITED STATES OF AMERICA
GENERAL SERVICES ADMINISTRATION
WASHINGTON, DC 20405



DEC 20 1974

Honorable Roy L. Ash
Director
Office of Management and Budget
Washington, DC 20503


Dear Mr. Ash:

By referral dated December 19, 1974, from the Assistant Director for Legislative Reference, your office requested the views of the General Services Administration on enrolled bill S. 1283, 93rd Congress, an act "To establish a national program for research and development in nonnuclear energy sources."

Under the bill the Energy Research and Development Administration would conduct a national program of basic and applied research and development, including demonstrations of practical applications, of potentially beneficial energy sources and utilization technologies. In doing so, ERDA would utilize various forms of Federal assistance and participation, including joint Federal-industry experimental, demonstration, or commercial corporations.

GSA has no objection to Presidential approval of the enrolled bill.

Sincerely,


Arthur F. Sampson
Administrator

THE SECRETARY OF THE
TREASURY
WASHINGTON, D. C. 20548

Dear Sir:

I am pleased to inform you that your application for a loan of \$100,000 under the Small Business Administration's (SBA) 7(a) program has been approved. The loan will be provided by the SBA's Small Business Lending Fund (SBLF) through the [Name of Lender].

The loan will be for a term of 10 years and will be repaid in 60 monthly installments. The interest rate will be the prime rate plus 2.00 percent. The SBA will guarantee 75 percent of the loan.

You will receive a copy of the loan agreement and other documents from the lender. Please contact the lender if you have any questions.

Sincerely,
[Signature]



RECEIVED
'74 DEC 23 AM 11:17
OFFICE OF MANAGEMENT
AND BUDGET

Department of Justice
Washington, D.C. 20530

DEC 26 1974

Honorable Roy L. Ash
Director, Office of Management
and Budget
Washington, D.C. 20503

Dear Mr. Ash:

In compliance with your request, I have examined a facsimile of the enrolled bill S. 1283, the proposed Federal Nonnuclear Energy Research and Development Act of 1974.

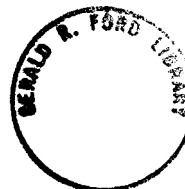
This bill, which sets forth a Congressional policy with respect to nonnuclear energy research and development, would require the Administrator of the new Energy Research and Development Administration to formulate and carry out a comprehensive Federal nonnuclear energy research, development, and demonstration program. The Administrator would be authorized to propose for Congressional consideration the establishment of joint Federal-industry corporations which would be subject to guidelines set forth in the bill.

The Department of Justice has no objection to Executive approval of S. 1283.

Sincerely,



W. Vincent Rakestraw
Assistant Attorney General





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'74 DEC 20 PM 3:42
OFFICE OF MANAGEMENT
AND BUDGET

NATIONAL SCIENCE FOUNDATION
WASHINGTON, D.C. 20550



OFFICE OF THE
DIRECTOR

December 20, 1974

Mr. Wilfred H. Rommel
Assistant Director for
Legislative Reference
Office of Management and Budget
Washington, D. C. 20503

Dear Mr. Rommel:

This is in reply to your communication of December 19, 1974, requesting the comments of the National Science Foundation on Enrolled Bill S. 1283, the Federal Nonnuclear Energy Research and Development Act of 1974.

The Foundation has no objection to approval of the bill by the President. If the President should decide to issue a statement upon signing the bill, I suggest that language along the following lines be considered for inclusion in such a statement:

"I am pleased also to note that the new Energy Research and Development Administration will have somewhat of a head start in nonnuclear energy research and development. The National Science Foundation has been supporting an accelerating program of research on solar energy in its various manifestations, including wind energy, photo-voltaic conversion and heat collection. It has also initiated programs in the use of solar energy for heating and cooling of buildings. In addition, programs have been started in improving ways to use geothermal energy. Many of these activities will be transferred in full operation as soon as the organization of the new agency is ready to receive them."

Sincerely yours,

A handwritten signature in cursive script, reading "H. Guyford Stever".

H. Guyford Stever
Director

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DATE RECEIVED

1974 DEC 20 PM 12:13
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OFFICE OF MANAGEMENT
AND BUDGET

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74 DEC 20 PM 12:13
OFFICE OF MANAGEMENT
AND BUDGET

EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
722 JACKSON PLACE, N. W.
WASHINGTON, D. C. 20006

December 20, 1974

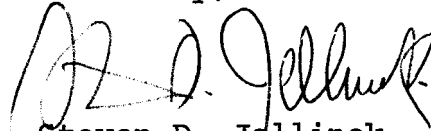
Mr. W.H. Rommel
Assistant Director for
Legislative Reference
Office of Management & Budget
Washington, D.C. 20503

Dear Mr. Rommel:

The Council on Environmental Quality has reviewed the enrolled bill S.1283, entitled "The Federal Nonnuclear Energy Research and Development Act of 1974".

We fully concur with the provisions of the bill and strongly recommend that it be signed.

Sincerely,



Steven D. Jellinek
Staff Director

OFFICE OF MANAGEMENT
AND BUDGET

74 DEC 23 PM 2:05

RECEIVED



UNITED STATES WATER RESOURCES COUNCIL

SUITE 800 • 2120 L STREET, N.W. WASHINGTON, D.C. 20037

December 23, 1974

Honorable Roy L. Ash
Director
Office of Management and Budget
Washington, D. C. 20503

Dear Mr. Ash:

This is in response to your request of December 19, 1974, for the Water Resources Council's views and recommendations on enrolled bill S. 1283:

"To establish a national program for research and development in nonnuclear energy sources."

Inasmuch as certain of the member agencies of the Council will be commenting individually on the enrolled bill, the Council will limit its comments to Sections 13 and 16(b)(2). Section 13 calls for the Council to undertake assessments, analyses and evaluations of regional and national water resources availability for Federal energy research and development efforts. Section 16(b)(2) provides for fund transfers not to exceed \$1 million annually to the Water Resources Council for the purposes authorized by Section 13.

In view of the short time frame, it was impossible to determine the position of the members on these two sections of the bill. Consequently, the representatives were solicited for their comments.

With respect to the two sections, the representatives of the Council (Departments of Agriculture, Army, Interior, Transportation, and the Federal Power Commission) have indicated no objection to the bill. The Environmental Protection Agency, an associate member, and the Council on Environmental Quality, an observer, also have indicated no objection to the bill. Other associate members and observers of the Council were not solicited.

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OFFICE OF MANAGEMENT AND BUDGET

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RECEIVED

As Director of the Water Resources Council, I report favorably on Sections 13 and 16(b)(2) of the subject bill.

Sincerely,

A handwritten signature in cursive script, reading "Warren D. Fairchild".

Warren D. Fairchild
Director





OFFICE OF THE SECRETARY OF TRANSPORTATION
WASHINGTON, D.C. 20590

Honorable Roy L. Ash
Director
Office of Management and Budget
Washington, D.C. 20503

Dear Mr. Ash:

You have asked for our comments on S. 1283, an enrolled bill

"To establish a national program for research
and development in nonnuclear energy sources."

Sections 6 and 8 are of interest to this Department.

Section 6 requires the Energy Research and Development Administrator to transmit to the Congress by June 30, 1975, a comprehensive nonnuclear energy research, development, and demonstration program. This program shall be designed to achieve solutions to the energy supply and associated environmental problems in the immediate and short-term (to the early 1980's), middle-term (the early 1980's to the year 2000), and long-term (beyond the year 2000) time intervals. The Administrator would be required to assign program elements and activities in specified nonnuclear energy technologies to the short-term, middle-term, and long-term time intervals. These program elements and activities must include research, development, and demonstrations designed to advance energy conservation technologies including, among other things,

"...improvements in automobile design for increased efficiency and lowered emissions, including investigation of the full range of alternatives to the internal combustion engine and systems of efficient public transportation."
(Section 6(b)(3)(A)(iii)).

This reference provides justification for continuation of the research and development of alternative automotive power systems that has been transferred from the Environmental Protection Agency to the Energy Research and Development Administration (ERDA). Continued coordination between DOT and ERDA should be required to ensure that the research and development programs relating to automotive energy and emissions are mutually supportive rather than duplicative.

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OFFICE OF MANAGEMENT
AND BUDGET

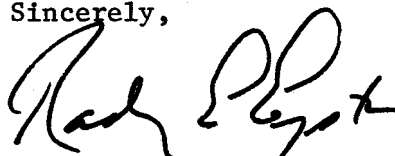
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Section 8 authorizes the Administrator to provide Federal assistance for, or participation in, demonstration projects including demonstrations of prototype commercial applications for the transportation of energy resources (Section 8(a)(1)). In addition, the Administrator, within six months of enactment, must issue regulations establishing procedures for submission of proposals to ERDA in order to carry out the purpose of the legislation. These regulations must establish a procedure for selection of proposals which provides that projects will be carried out under such conditions and varying circumstances as will assist in solving energy transportation problems of various areas and regions under representative geological, geographic, and environmental conditions (Section 8(d)(1)(A)). While we do not have any objection to the demonstration programs and projects called for by Section 8 of the enrolled bill, we would like to point out that this Department has the responsibility for implementing national transportation policy and would expect ERDA to consult with us on any programs or projects that have national transportation implications.

While we would have preferred language in the enrolled bill that would have specifically required ERDA to consult with DOT, we do not have any objection to the President signing the enrolled bill.

Sincerely,

A handwritten signature in black ink, appearing to read "Rodney E. Eyster". The signature is fluid and cursive, with the first name "Rodney" being the most prominent part.

Rodney E. Eyster
General Counsel



United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

DEC 24 1974

Dear Mr. Ash:

This responds to your request for the views of this Department on S. 1283, an enrolled bill "To establish a national program for research and development in nonnuclear energy sources", which is before the President for approval.

We recommend that the President approve the enrolled bill.

The bill requires the Energy Research and Development Administration, together with other Federal agencies, to carry out a nonnuclear energy research and development program in accordance with specified requirements. It sets forth purposes, plans, and organizational and financial arrangements for the program. Among other matters, the bill authorizes certain joint contracting and financing arrangements between the Federal Government and other organizations, including joint Federal-industry corporations and price support systems. General authority for demonstration projects costing up to \$50 million is provided, with a requirement that a comprehensive report on projects over \$25 million be filed with the Congress after which the Administrator must wait 60 days before funds are expended. At the request of the Administrator, the Water Resources Council would be required to assess water requirements and availability for nonnuclear energy technologies.

In general the legislation is consistent with the planned energy research and development programs of the Administration. While the enrolled bill is in many instances redundant of existing authority, we recommend Presidential approval of the bill since it does not conflict with the Administration's program in any major respect and may provide useful financial and organizational authority for carrying out that program.

Sincerely yours,

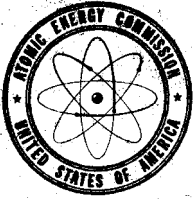
~~Assistant~~ Secretary of the Interior

Honorable Roy L. Ash
Director, Office of
Management and Budget
Washington, D.C.

OFFICE OF MANAGEMENT
AND BUDGET

74 DEC 29 AM 10:12

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

DEC 24 1974

Mr. Wilfred H. Rommel
Assistant Director for
Legislative Reference
ATTN: Mrs. Louise Garziglia
Legislative Reference Division
Office of Management and Budget

Dear Mr. Rommel:

The Atomic Energy Commission is pleased to respond to your request for its views and recommendations on Enrolled Bill S. 1283, "[t]o establish a national program for research and development in nonnuclear energy sources."

The bill, among other things, would establish certain governing principles, provide for various forms of Federal assistance, and establish Federal patent policy, for the purpose of carrying out Federal nonnuclear research and development activities by the Administrator of the Energy Research and Development Administration under the Energy Reorganization Act of 1974.

The Atomic Energy Commission recommends that the President sign the enrolled bill.

Sincerely,

A handwritten signature in black ink, appearing to read "William B. Eberhart".

Chairman

Mr. Wilfred H. Rommel
Assistant Director for
Legislative Reference
ATTN: Mrs. Louise Garcia
Legislative Reference Division
Office of Management and Budget

Dear Mr. Rommel:

The Atomic Energy Commission is pleased to respond to your request for its views and recommendations on Enrolled Bill S. 1283, "[t]o establish a national program for research and development in nonnuclear energy sources."

The bill, among other things, would establish certain governing principles, provide for various forms of Federal assistance, and establish Federal patent policy, for the purpose of carrying out Federal nonnuclear research and development activities by the Administrator of the Energy Research and Development Administration under the Energy Reorganization Act of 1974.

The Atomic Energy Commission recommends that the President sign the enrolled bill.

Sincerely,

Chairman

OFFICE OF MANAGEMENT
AND BUDGET

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THE UNDER SECRETARY OF THE TREASURY

WASHINGTON, D.C. 20220

DEC 26 1974

Director, Office of Management and Budget
Executive Office of the President
Washington, D. C. 20503

Attention: Assistant Director for Legislative
Reference

Sir:

Your office has requested the views of this Department on the enrolled enactment of S. 1283, "To establish a national program for research and development in nonnuclear energy resources."

The purpose of the enrolled enactment is to enable the Administrator of the Energy Research and Development Administration to conduct a comprehensive, national program of basic and applied research and development, including but not limited to demonstrations of practical applications, of all potentially beneficial energy sources and utilization technologies. To carry out the intent of the enrolled enactment, the Administrator could provide certain Federal assistance including Federal purchases or guaranteed price of the products of demonstration plants or activities and Federal loans to non-Federal entities conducting demonstrations of new technologies.

The enrolled enactment does not define the terms and conditions under which the Administrator of the Energy Research and Development Administration may make loans. There are no provisions with respect to maturities, interest rates, fees, loan-to-value ratios, equity requirements, credit needs tests, or other provisions to assure effective, efficient, and equitable administration of the loan program in accord with overall Administration policy on Federal credit programs as contained in OMB Circular No. A-70.

The Department has no objection to a recommendation that the enrolled enactment be approved by the President. However, the Department recommends that the Administrator of ERDA be directed to administer any credit advanced under the provisions of the enrolled enactment in accordance with the provisions of OMB Circular A-70.

Sincerely yours,

A handwritten signature in cursive script, reading "Edward C. Schmults".

Edward C. Schmults



OFFICE OF MANAGEMENT
AND BUDGET

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THE UNDER SECRETARY OF COMMERCE
Washington, D.C. 20230

DEC 26 1974

Honorable Roy L. Ash
Director, Office of Management
and Budget
Washington, D. C. 20503

Attention: Assistant Director for Legislative Reference

Dear Mr. Ash:

This is in reply to your request for the views of this Department concerning S. 1283, an enrolled enactment

"To establish a national program for research and development in nonnuclear energy sources,"

to be cited as the Federal Nonnuclear Energy Research and Development Act of 1974".

The Department of Commerce recommends approval by the President of S. 1283.

Section 12 of the Act provides that the President may, by rule or order, require the allocation of, or the performance under contracts or orders relating to, supplies of materials and equipment which are scarce, critical, and essential to carry out the purposes of the Act and which cannot reasonably be obtained without exercising such rule or order authority.

The Department of Commerce could reasonably be expected to be called upon by the President to administer this Section concurrent with the Department's present allocation responsibilities under the Defense Production Act and expected allocation responsibilities under the Safe Drinking Water Act.

Section 14 of the Act directs the National Bureau of Standards to give particular attention to the evaluation of all promising energy-related inventions, particularly those submitted by individual inventors and small companies for the purpose of obtaining direct grants from the Administrator.



OFFICE OF MANAGEMENT
AND BUDGET

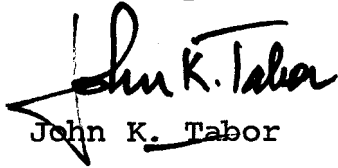
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At this time we cannot substantively assess the budgetary impact of an increased allocation program under Section 12. However, we can foresee a need for increased personnel and funding to operate a program of this nature.

With respect to the functions set forth in Section 14, it is estimated it would cost \$1,750,000 and require 15 positions. It is recommended that this Department be reimbursed by ERDA for performing these functions.

Sincerely,

Handwritten signature of John K. Tabor in cursive script.

John K. Tabor

THE WHITE HOUSE

ACTION MEMORANDUM

WASHINGTON

LOG NO.: 840

Date: December 26, 1974

Time: 3:00 p.m.

FOR ACTION: Mike Duval *ok Kow*
Phil Areeda *noobj*
Max Friedersdorf *th*

cc (for information): Warren Hendriks
Jerry Jones
NSC/S 10 obj

FROM THE STAFF SECRETARY

DUE: Date: Friday, December 27

Time: noon

SUBJECT:

Enrolled Bill S. 1283 - Federal Nonnuclear Energy
Research and Development Act of 1974

ACTION REQUESTED:

- For Necessary Action
- For Your Recommendations
- Prepare Agenda and Brief
- Draft Reply
- For Your Comments
- Draft Remarks

REMARKS:

Please return to Judy Johnston, Ground Floor West Wing



PLEASE ATTACH THIS COPY TO MATERIAL SUBMITTED.

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

K. R. COLE, JR.
For the President

THE WHITE HOUSE

MEMORANDUM

WASHINGTON

LOG NO.: 840

December 27, 1974

Time: 9:00 p.m.

FOR ACTION: Mike Duval ✓ *ok*
Phil Areeda
Max Friedersdorf

cc (for information): Warren Hendriks
Jerry Jones
NSC/S

FROM THE STAFF SECRETARY

DUE: Date: Friday, December 27

Time: 1:00 p.m.

SUBJECT:

Enrolled Bill S. 1283 - Federal Nonnuclear Energy
Research and Development Act of 1974

ACTION REQUESTED:

For Necessary Action

For Your Recommendations

Prepare Agenda and Brief

Draft Reply

For Your Comments

Draft Remarks

REMARKS:

Please return to Judy Johnston, Ground Floor West Wing



PLEASE ATTACH THIS COPY TO MATERIAL SUBMITTED.

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

Warren K. Hendriks
For the President

THE WHITE HOUSE
WASHINGTON

December 27, 1974

MEMORANDUM FOR: WARREN HENDRIKS
FROM: *Vern Riffe* MAX L. FRIEDERSDORF
SUBJECT: Action Memorandum - Log No. 840
Enrolled Bill S. 1283
Federal Nonnuclear Energy Research
and Development Act of 1974

The Office of Legislative Affairs concurs in the attached proposal and has no additional recommendations.

Attachment



Date: December 27, 1974

Time: ~~9:00~~^{11:30} p.m.

FOR ACTION: Mike Duval
Phil Areeda ✓
Max Friedersdorf

cc (for information): Warren Hendriks
Jerry Jones
NSC/S

FROM THE STAFF SECRETARY

DUE: Date: Friday, December 27

Time: 1:00 p.m.

SUBJECT:

Enrolled Bill S. 1283 - Federal Nonnuclear Energy
Research and Development Act of 1974

ACTION REQUESTED:

For Necessary Action

For Your Recommendations

Prepare Agenda and Brief

Draft Reply

For Your Comments

Draft Remarks

REMARKS:

Please return to Judy Johnston, Ground Floor West Wing

*No objection
P Areeda*



PLEASE ATTACH THIS COPY TO MATERIAL SUBMITTED.

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

Warren K. Hendriks
For the President



THE GENERAL COUNSEL OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, D. C. 20410

DEC 27 1974

Mr. Wilfred H. Rommel
Assistant Director for
Legislative Reference
Office of Management and Budget
Washington, D. C. 20503

Attention: Ms. Mohr

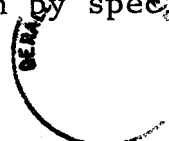
Dear Mr. Rommel:

Subject: S. 1283, 93d Congress, Enrolled Enactment

This is in response to your request for our views on the enrolled enactment of S. 1283, the "Federal Nonnuclear Energy Research and Development Act of 1974".

The enactment would require the Administrator of the Energy Research and Development Administration to undertake a comprehensive, national program for research, demonstration and development of all potentially beneficial energy sources and utilization technologies. Program elements would be required to include research, development and demonstrations of advanced urban and architectural design to promote efficient energy use in residential and commercial sectors.

Among other things, Federal assistance could include establishment of joint Federal-industry corporations authorized to construct and operate facilities to ascertain the feasibility of a particular energy technology, construction and operation of Federally owned facilities, and Federal purchases or guaranteed price of demonstration products. The establishment of any joint Federal-industry corporations and the implementation of any price support program would require prior Congressional authorization by specific legislation.





OFFICE OF MANAGEMENT
AND BUDGET

'74 DEC 28 AM 10:57

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The enactment also sets forth a patent policy, provides for environmental evaluation of the effect of application of nonnuclear energy technologies, and requires the Water Resources Council to assess technologies undertaken under the enactment which could have significant impact on water resources.

The President would be authorized to require the priority allocation of scarce materials essential to carrying out the purposes of the enactment, subject to Congressional review of rules or orders in this regard.

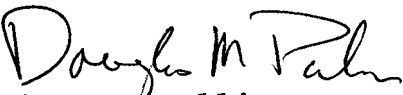
The Energy Research and Development Administrator, in carrying out the program under the enactment, would be required to incorporate programs in specific technologies authorized under previously enacted law, including programs under the "Solar Heating and Cooling Demonstration Act of 1974 (P. L. 93-409)". In addition, commercial demonstrations of advanced solar energy technologies under P. L. 93-409 would be required to be included in the program elements specified under the enactment.

We are unclear as to what is actually intended by these requirements. Under P. L. 93-409, this Department is given the responsibility for installing and monitoring the performance and suitability of solar heating and combined solar heating and cooling components and systems for residential use, and for promulgating criteria in this regard and maintaining and disseminating program information. We would not, in any event, interpret the enactment as providing for the transfer of those functions to the Energy Administration, since they are vested in HUD under P. L. 93-409. In addition, we feel that any potential duplication of effort in this regard under P. L. 93-409 or the enactment could be avoided through proper coordination.

In view of this, the Department of Housing and Urban Development has no objection to the approval of S. 1283 by the President. We would defer to the other Federal agencies specified in the bill -- and particularly to the Energy

Administration -- as to the desirability of those provisions which directly affect them or involve matters within their larger expertise and jurisdiction.

Sincerely,

for 
Robert R. Elliott

FEDERAL POWER COMMISSION
WASHINGTON, D.C. 20426

DEC 30 1974

Enrolled Bill, S. 1283 - 93d Congress
Federal Nonnuclear Energy Research and
Development Act of 1974

Honorable Roy L. Ash
Director, Office of Management and Budget
Executive Office of the President
Washington, D. C. 20503

Attention: Ms. Mohr
Legislative Reference Division
Room 7201, New Executive Office Building

Dear Mr. Ash:

This is in response to Mr. Rommel's request of December 19, 1974, for this Commission's views on S. 1283, an Enrolled Bill, "To establish a national program for research, development, and demonstration in fuels and energy and for the coordination and financial supplementation of Federal energy research and development."

As enrolled, the bill would provide a framework of authority and a congressional policy for a national program of research, development, and demonstration of nonnuclear fuels and energy. In its entirety, the bill would provide the necessary initiative and direction for a coordinated Federal effort in this vital area. The bill recognizes the critical shortage of environmentally acceptable forms of energy which is compounded by a past and present failure to formulate a comprehensive energy research and development strategy. Its avowed purpose is to vigorously conduct a national program of research and development.

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AND BUDGET



The Administrator is directed to review the current status of non-nuclear energy resources and to formulate and implement a comprehensive Federal nonnuclear energy research, development, and demonstration program, which is to be designed and executed according to certain explicitly defined governing principles. The bill also mandates that a comprehensive plan for energy research, development, and demonstration be transmitted to Congress by June 30, 1975. The bill suggests various forms of Federal assistance and participation which the Administrator may utilize, and authorizes him to identify opportunities to accelerate the commercial applications of new energy technologies, provide Federal assistance for or participation in demonstration projects, and enter into cooperative agreements with non-Federal entities to demonstrate the technical feasibility and economic potential of energy technologies on a prototype or full-scale basis.

The bill sets forth the policy to guide allocation of patent rights in programs implemented under its authority and stipulates that nothing shall be deemed to convey to any person immunity from liability under the anti-trust laws. The Council on Environmental Quality is authorized and directed to carry out a continuing assessment of the programs of energy research and development in relation to energy conservation and environmental concerns and the President is given authority to require the priority allocation of scarce materials which are essential for implementing the Bill's purposes.

Section 13 of the Bill empowers the Water Resources Council, at the request of the Administrator, to undertake assessments of water resource requirements and water supply availability for any nonnuclear energy technologies which are the subject of Federal research and development efforts authorized by the Act. The Federal Power Commission as a member of the Water Resources Council would participate in any undertakings pursuant to this section of the Act.

The Bill directs the National Bureau of Standards to keep ERDA informed concerning promising inventions which should be considered for inclusion in demonstration programs. It also directs the Administrator to submit a report to Congress concurrent with the submission of the President's annual budget and to revise annually the comprehensive nonnuclear energy research, development, and demonstration program prepared pursuant to the Bill. Provisions further include the authorization for necessary appropriations.

In sum, S. 1283 as enrolled undertakes to provide the Congressionally defined priorities and guidelines, the policies and the funding levels which the Administrator of the newly created Energy Research and Development Administration (ERDA) is to follow in nonnuclear research and development programs.

As originally introduced, S. 1283 provided for the appropriation of approximately \$2 billion annually of Federal funds over a 10-year period to carry out a massive program of research, development, and demonstration projects for innovation or improvement in the areas of fuel and energy resources production and utilization technology, including commercialization of alternative forms.

To implement this program the bill would have established an Energy Research Management Project (Project), composed of an Assistant Secretary of the Interior, an AEC Commissioner, an FPC Commissioner, an Assistant Administrator of EPA, and an Assistant Administrator of NASA, each designated by the agency or department head; also designated as members were the Director of the National Science Foundation, other representatives from agencies which the President may have found to have significant energy research and development roles, and a full-time Chairman appointed by the President subject to Senate confirmation. The Project would have reviewed Federal research and development (R&D) and formulated a comprehensive energy R&D strategy for the Federal Government. The Project would have received \$800 million annually for 5 years to supplement ongoing energy R&D programs of Federal agencies and to initiate and maintain new energy programs or activities utilizing the facilities, capabilities, expertise, and experience of Federal agencies, national laboratories, universities, non-profit organizations, and industrial entities. Federal departments and agencies would have been authorized to make funds available to the Project and also to detail personnel to it on a reimbursable basis.

The other five titles of S. 1283 would have established five Government-industry corporations jointly managed and funded to bring to the stage of commercial application the energy technologies of shale oil production, coal gasification, advanced power cycles, coal liquefaction, and geothermal energy. Each corporation would have selected two or more promising methods

for achieving its objective, build demonstration facilities for each method, and finally construct full-scale, commercial-size facilities. The Secretary of the Interior was directed to make available to the Corporation certain Federal lands which contain minerals necessary to carry out the research program.

The Commission in its report to the Senate Interior and Insular Affairs Committee on S. 1283, dated September 28, 1973 (S. Rept. 93-589, pp. 49-53) and Chairman Nassikas in earlier testimony on the bill before the Committee on June 22, 1973 (Hearings, pp. 313-416) supported greater Federal spending for research and development on energy technology, but expressed disapproval of the particular public-private corporate structures described in the bill. The report concluded, "We believe it would be premature as the bill contemplates, to create the complex and specialized public-private corporate structure for the management of energy research and development and dedicate substantial funds to such R&D efforts until we have achieved the more fundamental needs of reorganizing energy responsibility in government and establishing legislative and administrative energy policies to define our energy goals as a Nation."

In lieu of S. 1283, the Commission recommended enactment of pending legislation to, among other things, establish the Energy Research and Development Administration (ERDA) as "a more logical first step to solving our long-range national needs."

The Energy Reorganization Act of 1974 (P.L. No. 93-438), adopting the concept of the earlier energy reorganization bills cited above, created the Energy Research and Development Administration */ which will become responsible for administration of the R&D programs provided for in the enrolled bill. In addition, that law established the Energy Resources Council in the Executive Office of the President. The Chairman of the Federal Power Commission is invited to attend meetings of the Council (E.O. 11819, 10 Pres. Docs. 1468). These actions tend to alleviate the Commission's initial basic objection to S. 1283 and comport with our previous views on this subject.

*/ The responsibilities of the Administrator include: 1) policy respecting all energy sources; 2) encouraging and conducting R&D demonstration of commercial feasibility and practical application of various phases of development and use of various forms of energy; 3) engaging in and supporting environmental, biomedical, physical and safety research related to the development of energy sources; 4) supporting cooperative R&D projects with other public and private persons or agencies; 5) encouraging and conducting R&D in energy conservation; 6) developing, collecting and distributing scientific and technical information concerning the manufacture and development of energy; and 7) helping to assure an adequate supply of manpower for accomplishing energy R&D programs.

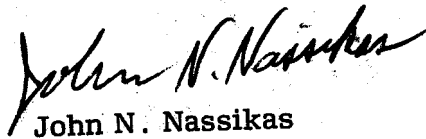
Honorable Roy L. Ash

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The Federal Power Commission recognizes the immediate and long-range importance of implementating the programs and activities of ERDA. The Commission accordingly concurs in the purposes of S. 1283, as enrolled. However, we express no views with respect to the merits of any specific procedures and funding levels or methods and priorities for carrying out the goals of this legislation.

The enactment of the Enrolled Bill, S. 1283, will not significantly affect this agency's budget.

Sincerely,



John N. Nassikas
Chairman



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 2 1975

OFFICE OF THE
ADMINISTRATOR

Dear Mr. Ash:

This is in response to the Office of Management and Budget's request for the Environmental Protection Agency's views and recommendations on S. 1283, an enrolled bill entitled "Federal Nonnuclear Energy Research and Development Act of 1974."

The Congressional statement of findings and policy are set forth in sections 2 and 3 of the enrolled bill, respectively. Section 2 emphasizes that the United States is suffering from a shortage of environmentally acceptable forms of energy; that this shortage has, in part, resulted from the failure to formulate a comprehensive research and development program; and, that a large commitment of financial resources and scientific expertise is necessary to develop new nonnuclear energy options.

The Congressional policy, as set forth in section 3 of the enrolled bill, is to develop the technological capabilities to support the broadest range of energy policy options through conservation and use of domestic energy resources by environmentally and socially acceptable means. This policy is implemented by directing the Administrator of the Energy Research and Development Administration (ERDA) to establish and conduct a national program of basic and applied research and development under the provisions of this enrolled bill and other relevant existing laws, such as the Solar Heating and Cooling Demonstration Act of 1974, the Geothermal Energy Research, Development, and Demonstration Act of 1974, and the Solar Energy Research, Development, and Demonstration Act of 1974.

Section 4 of the enrolled bill sets forth the duties and authorities of the Administrator of ERDA. These include requirements to review the current nonnuclear energy research and development activities of public and private entities; to formulate and carry out a comprehensive Federal nonnuclear energy research, development, and demonstration program; and to utilize funds, through various techniques, so as to take full advantage of existing public and private expertise.





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Section 5 contains the governing principles by which the comprehensive nonnuclear energy research, development and demonstration program would be designed and executed. Foremost among these principles is the requirement that energy conservation must be a primary consideration in the design and implementation of the comprehensive program. Energy conservation is defined to include both improvement in efficiency of energy production and use, and reduction in energy waste. Other governing principles would require an analysis and consideration of the environmental and social consequences of a proposed program. Furthermore, section 5 requires an analysis and consideration of the water resources impact, if relevant, and the potential for production of net energy in evaluating programs for the development of technologies.

Section 5 also requires the Administrator of ERDA to consider certain specified factors in determining the appropriateness of Federal involvement in any particular research and development undertaking.

Section 6 of the enrolled bill directs the Administrator of ERDA to transmit to the Congress on or before June 30, 1975, a comprehensive plan for energy research, development, and demonstration. By the same date, the Administrator must transmit to Congress a comprehensive nonnuclear energy research development and demonstration program to implement the non-nuclear aspects of the comprehensive plan. The Administrator of ERDA must design the program to achieve solutions to energy supply and associated environmental problems in the immediate, short-term (early 1980's), middle-term (early 1980's to 2000) and long-term (beyond 2000) time intervals.

The Administrator of ERDA must assign program elements and activities in specific nonnuclear energy technologies to a certain time interval and present a full and complete justification for the assignment. Section 6 sets forth an inclusive list of what program elements and activities shall be included in the comprehensive nonnuclear program.

Section 7 of the enrolled bill authorizes the Administrator to utilize various forms of Federal assistance and participation. This section also sets forth guidelines for any joint Federal-industry corporations proposed for Congressional authorization under the enrolled bill. Further, section 7 sets forth guidelines for any competitive systems of price support proposed for Congressional authorization pursuant to the enrolled bill.

Section 8 of the enrolled bill authorizes the Administrator of ERDA to provide Federal assistance for or participation in demonstration projects and to enter into cooperative agreements with non-Federal entities to demonstrate the technical feasibility and economic potential of energy technologies on a prototype or full scale basis. Section 8 sets forth inclusive criteria to govern the Administrator's discretion in reviewing potential projects, the procedures to be followed in approving a particular project, and the conditions precedent to Federal assistance or participation.

Section 9 sets forth the patent policy applicable to all nonnuclear contracts of ERDA. Nuclear energy research, development, or demonstration contracts will continue to be governed by the provisions of the Atomic Energy Act of 1954, as amended.

Section 9 provides for the Federal government normally to retain title to inventions developed under ERDA contracts, and for the licensing of ERDA inventions normally to be granted on a nonexclusive basis. In conformity with specific criteria, the Administrator of ERDA is given authority to grant waivers and exclusive or partially exclusive licenses.

Section 10 provides that the antitrust laws of the United States are fully applicable to activities taken pursuant to the enrolled bill.

Section 11 of the enrolled bill authorizes and directs the Council on Environmental Quality to carry out a continuing analysis of nonnuclear energy technologies with a view towards the adequacy of attention to energy conservation methods and the adequacy of environmental protective measures.

Section 12 authorizes the President of the United States to allocate materials and equipment to carry out the purposes of the enrolled bill. This power is subject to certain Presidential findings of fact and Congressional oversight.

Section 13 of the enrolled bill describes the water resource evaluation responsibilities and procedures for various circumstances. At the request of the Administrator of ERDA, the Water Resources Council must undertake an assessment of the water resources requirements and water supply availability for any nonnuclear energy technology or combination of technologies using certain specified criteria. For any proposed demonstration project which may have a significant

impact on water resources, the Administrator of ERDA must prepare or have prepared, as a precondition to Federal assistance, an assessment of the availability of adequate water resources. Thirty days prior to the expenditure of Federal funds on any such project, the Administrator must publish the assessment report for public review. For any proposed Federal assistance for commercial application of energy technologies pursuant to this enrolled bill, the Water Resources Council must, as a precondition to Federal assistance, provide to the Administrator an assessment of the availability of adequate water resources for such commercial application and an evaluation of the environmental, social, and economic impacts of the dedication of water to such uses. Any assessment made by the Water Resources Council must be published in the Federal Register and is subject to a mandatory 90-day public review and comment period.

Section 14 directs the National Bureau of Standards to give priority to promising energy-related inventions.

Section 15 requires several reports to Congress from the Administrator of ERDA.

Section 16 contains the appropriation authorizations. To carry out the purposes of the enrolled bill, the Congress authorizes such sums as are appropriated in annual authorizations acts. Of the amounts appropriated annually, \$500,000 must be made available by fund transfer to the Council on Environmental Quality for the purposes authorized by Section 11 and no more than \$1,000,000 must be made available by fund transfer to the Water Resources Council for the purposes authorized by section 13. Amounts required for demonstration projects for which the total Federal contribution to construction costs exceeds \$50,000,000 are authorized to be appropriated to the Administrator by separate acts of Congress.

The Environmental Protection Agency recommends that the President of the United States sign this enrolled bill into law.

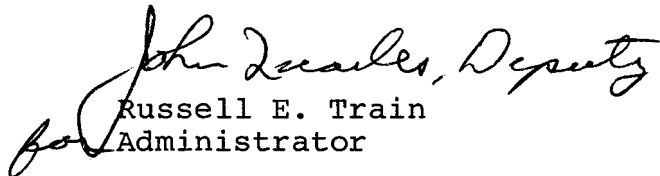
The Energy Research and Development Administration (ERDA) was established by the Energy Reorganization Act of 1974. That law, in part, set forth the basic structural design for future Federal energy research and development. This enrolled bill is designed to give policy guidance and emphasis in the area of nonnuclear energy research, development, and demonstration, an area which was not fully spelled out in the Energy Reorganization Act of 1974. In this regard,

we concur with this enrolled bill's basic purpose, that is "... to support the broadest range of energy policy options through conservation and use of domestic resources by socially and environmentally acceptable means."

One of the most effective means by which to prevent pollution from energy usage and thereby minimize environmental degradation is to introduce conservation and environmental concerns at the earliest development stages possible. The Environmental Protection Agency, in fulfilling our statutory obligations, has developed many programs which incidentally serve the same objectives with which this enrolled bill is concerned.

The legislative history of this enrolled bill makes clear that the Congress has no intention of creating a program within ERDA which will in any way supplant the energy recovery and conservation efforts being carried out by the Environmental Protection Agency. Nor is it the Congressional intent that ERDA should in any way create a program which will be duplicative of or detract from EPA efforts or which would divert resources from either present or future program efforts.

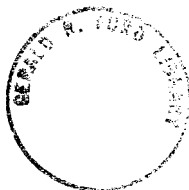
Sincerely yours,


Russell E. Train
Administrator

Honorable Roy L. Ash
Director
Office of Management and Budget
Washington, D. C. 20503

FEDERAL NONNUCLEAR ENERGY RESEARCH AND
DEVELOPMENT ACT OF 1974

DECEMBER 11, 1974.—Ordered to be printed



Mr. UDALL, from the committee of conference,
submitted the following

CONFERENCE REPORT

[To accompany S. 1283]

The committee of conference on the disagreeing votes of the two Houses on the amendment of the House to the bill (S. 1283) to establish a national program for research, development, and demonstration in fuels and energy and for the coordination and financial supplementation of Federal energy research and development; and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the Senate recede from its disagreement to the amendment of the House to the text of the bill and agree to the same with an amendment as follows:

In lieu of the matter proposed to be inserted by the House amendment insert the following:

SHORT TITLE

Sec. 1. This Act may be cited as the "Federal Nonnuclear Energy Research and Development Act of 1974".

STATEMENT OF FINDINGS

Sec. 2. The Congress hereby finds that—

(a) *The Nation is suffering from a shortage of environmentally acceptable forms of energy.*

(b) *Compounding this energy shortage is our past and present failure to formulate a comprehensive and aggressive research and development program designed to make available to American consumers our large domestic energy reserves including fossil fuels, nuclear fuels, geothermal resources, solar energy, and other forms of energy. This failure is partially because the unconventional energy technologies have not been judged to be economically competitive with traditional energy technologies.*

(c) *The urgency of the Nation's energy challenge will require commitments similar to those undertaken in the Manhattan and Apollo*

projects; it will require that the Nation undertake a research, development, and demonstration program in nonnuclear energy technologies with a total Federal investment which may reach or exceed \$20,000,000,000 over the next decade.

(d) In undertaking such program, full advantage must be taken of the existing technical and managerial expertise in the various energy fields within Federal agencies and particularly in the private sector.

(e) The Nation's future energy needs can be met if a national commitment is made now to dedicate the necessary financial resources, to enlist our scientific and technological capabilities, and to accord the proper priority to developing new nonnuclear energy options to serve national needs, conserve vital resources, and protect the environment.

STATEMENT OF POLICY

SEC. 3. (a) It is the policy of the Congress to develop on an urgent basis the technological capabilities to support the broadest range of energy policy options through conservation and use of domestic resources by socially and environmentally acceptable means.

(b) (1) The Congress declares the purpose of this Act to be to establish and vigorously conduct a comprehensive, national program of basic and applied research and development, including but not limited to demonstrations of practical applications of all potentially beneficial energy sources and utilization technologies, within the Energy Research and Development Administration.

(2) In carrying out this program, the Administrator of the Energy Research and Development Administration (hereinafter in this Act referred to as the "Administrator") shall be governed by the terms of this Act and other applicable provisions of law with respect to all nonnuclear aspects of the research, development, and demonstration program; and the policies and provisions of the Atomic Energy Act of 1954 (42 U.S.C. 2011 et seq.) and other provisions of law shall continue to apply to the nuclear research, development, and demonstration program.

(3) In implementing and conducting the research, development, and demonstration programs pursuant to this Act, the Administrator shall incorporate programs in specific nonnuclear technologies previously enacted into law, including those established by the Solar Heating and Cooling Act of 1974 (Public Law 93-409), the Geothermal Energy Research, Development, and Demonstration Act of 1974 (Public Law 93-410), and the Solar Energy Research, Development, and Demonstration Act of 1974 (Public Law 93-473).

DUTIES AND AUTHORITIES OF THE ADMINISTRATOR

SEC. 4. The Administrator shall—

(a) review the current status of nonnuclear energy resources and current nonnuclear energy research and development activities, including research and development being conducted by Federal and non-Federal entities;

(b) formulate and carry out a comprehensive Federal nonnuclear energy research, development, and demonstration program which will expeditiously advance the policies established by this

Act and other relevant legislation establishing programs in specific energy technologies;

(c) utilize the funds authorized pursuant to this Act to advance energy research and development by initiating and maintaining, through fund transfers, grants, or contracts, energy research, development and demonstration programs or activities utilizing the facilities, capabilities, expertise, and experience of Federal agencies, national laboratories, universities, nonprofit organizations, industrial entities, and other non-Federal entities which are appropriate to each type of research, development, and demonstration activity;

(d) establish procedures for periodic consultation with representatives of science, industry, environmental organizations, consumers, and other groups who have special expertise in the areas of energy research, development, and technology; and

(e) initiate programs to design, construct, and operate energy facilities of sufficient size to demonstrate the technical and economic feasibility of utilizing various forms of nonnuclear energy.

GOVERNING PRINCIPLES

SEC. 5. (a) The Congress authorizes and directs that the comprehensive program in research, development, and demonstration required by this Act shall be designed and executed according to the following principles:

(1) Energy conservation shall be a primary consideration in the design and implementation of the Federal nonnuclear energy program. For the purposes of this Act, energy conservation means both improvement in efficiency of energy production and use, and reduction in energy waste.

(2) The environmental and social consequences of a proposed program shall be analyzed and considered in evaluating its potential.

(3) Any program for the development of a technology which may require significant consumptive use of water after the technology has reached the stage of commercial application shall include thorough consideration of the impacts of such technology and use on water resources pursuant to the provisions of section 13.

(4) Heavy emphasis shall be given to those technologies which utilize renewable or essentially inexhaustible energy sources.

(5) The potential for production of net energy by the proposed technology at the stage of commercial application shall be analyzed and considered in evaluating proposals.

(b) The Congress further directs that the execution of the comprehensive research, development, and demonstration program shall conform to the following principles:

(1) Research and development of nonnuclear energy sources shall be pursued in such a way as to facilitate the commercial availability of adequate supplies of energy to all regions of the United States.

(2) In determining the appropriateness of Federal involvement in any particular research and development undertaking, the Administrator shall give consideration to the extent to which the pro-

posed undertaking satisfies criteria including, but not limited to, the following:

(A) The urgency of public need for the potential results of the research, development, or demonstration effort is high, and it is unlikely that similar results would be achieved in a timely manner in the absence of Federal assistance.

(B) The potential opportunities for non-Federal interests to recapture the investment in the undertaking through the normal commercial utilization of proprietary knowledge appear inadequate to encourage timely results.

(C) The extent of the problems treated and the objectives sought by the undertaking are national or widespread in their significance.

(D) There are limited opportunities to induce non-Federal support of the undertaking through regulatory actions, end use controls, tax and price incentives, public education, or other alternatives to direct Federal financial assistance.

(E) The degree of risk of loss of investment inherent in the research is high, and the availability or risk capital to the non-Federal entities which might otherwise engage in the field of the research is inadequate for the timely development of the technology.

(F) The magnitude of the investment appears to exceed the financial capabilities of potential non-Federal participants in the research to support effective efforts.

COMPREHENSIVE PLANNING AND PROGRAMMING

SEC. 6. (a) Pursuant to the authority and directions of this Act and the Energy Reorganization Act of 1974 (Public Law 93-438), the Administrator shall transmit to the Congress, on or before June 30, 1975, a comprehensive plan for energy research, development, and demonstration. This plan shall be appropriately revised annually as provided in section 15 (a). Such plan shall be designed to achieve—

(1) solutions to immediate and short-term (to the early 1980's) energy supply system and associated environmental problems;

(2) solutions to middle-term (the early 1980's to 2000) energy supply system and associated environmental problems; and

(3) solutions to long-term (beyond 2000) energy supply system and associated environmental problems.

(b) (1) Based on the comprehensive energy research, development, and demonstration plan developed under subsection (a), the Administrator shall develop and transmit to the Congress, on or before June 30, 1975, a comprehensive nonnuclear energy research, development, and demonstration program to implement the nonnuclear research, development, and demonstration aspects of the comprehensive plan.

(2) This program shall be designed to achieve solutions to the energy supply and associated environmental problems in the immediate and short-term (to the early 1980's), middle-term (the early 1980's to 2000), and long-term (beyond 2000) time intervals. In formulating the nonnuclear aspects of this program, the Administrator shall evaluate the economic, environmental, and technological merits of each aspect of the program.

(3) The Administrator shall assign program elements and activities in specific nonnuclear energy technologies to the short-term, middle-term, and long-term time intervals, and shall present full and complete justification for these assignments and the degree of emphasis for each. These program elements and activities shall include, but not be limited to, research, development, and demonstrations designed—

(A) to advance energy conservation technologies, including but not limited to—

(i) productive use of waste, including garbage, sewage, agricultural wastes, and industrial waste heat;

(ii) reuse and recycling of materials and consumer products;

(iii) improvements in automobile design for increased efficiency and lowered emissions, including investigation of the full range of alternatives to the internal combustion engine and systems of efficient public transportation; and

(iv) advanced urban and architectural design to promote efficient energy use in the residential and commercial sectors, improvements in home design and insulation technologies, small thermal storage units and increased efficiency in electrical appliances and lighting fixtures;

(B) to accelerate the commercial demonstration of technologies for producing low-sulfur fuels suitable for boiler use;

(C) to demonstrate improved methods for the generation, storage, and transmission of electrical energy through (i) advances in gas turbine technologies, combined power cycles, the use of low British thermal unit gas and, if practicable, magnetohydrodynamics; (ii) storage systems to allow more efficient load following, including the use of inertial energy storage systems; and (iii) improvement in cryogenic transmission methods;

(D) to accelerate the commercial demonstration of technologies for producing substitutes for natural gas, including coal gasification: Provided, That the Administrator shall invite and consider proposals from potential participants based upon Federal assistance and participation in the form of a joint Federal-industry corporation, and recommendations pursuant to this clause shall be accompanied by a report on the viability of using this form of Federal assistance or participation;

(E) to accelerate the commercial demonstration of technologies for producing syncrude and liquid petroleum products from coal: Provided, That the Administrator shall invite and consider proposals from potential participants based upon Federal assistance and participation through guaranteed prices or purchase of the products, and recommendations pursuant to this clause shall be accompanied by a report on the viability of using this form of Federal assistance or participation;

(F) in accordance with the program authorized by the Geothermal Energy Research, Development, and Demonstration Act of 1974 (Public Law 93-410), to accelerate the commercial demonstration of geothermal energy technologies;

(G) to demonstrate the production of syncrude from oil shale by all promising technologies including in situ technologies;

(H) to demonstrate new and improved methods for the extraction of petroleum resources, including secondary and tertiary recovery of crude oil;

(I) to demonstrate the economics and commercial viability of solar energy for residential and commercial energy supply applications in accordance with the program authorized by the Solar Heating and Cooling Act of 1974 (Public Law 93-409);

(J) to accelerate the commercial demonstration of environmental control systems for energy technologies developed pursuant to this Act;

(K) to investigate the technical and economic feasibility of tidal power for supplying electrical energy;

(L) to commercially demonstrate advanced solar energy technologies in accordance with the Solar Research, Development and Demonstration Act of 1974 (Public Law 93-473);

(M) to determine the economics and commercial viability of the production of synthetic fuels such as hydrogen and methanol;

(N) to commercially demonstrate the use of fuel cells for central station electric power generation;

(O) to determine the economics and commercial viability of in situ coal gasification;

(P) to improve techniques for the management of existing energy systems by means of quality control; application of systems analysis, communications, and computer techniques; and public information with the objective of improving the reliability and efficiency of energy supplies and encourage the conservation of energy resources; and

(Q) to improve methods for the prevention and cleanup of marine oil spills.

FORMS OF FEDERAL ASSISTANCE

Sec. 7. (a) In carrying out the objectives of this Act, the Administrator may utilize various forms of Federal assistance and participation which may include but are not limited to—

(1) joint Federal-industry experimental, demonstration, or commercial corporations consistent with the provisions of subsection (b) of this section;

(2) contractual arrangements with non-Federal participants including corporations, consortia, universities, governmental entities, and nonprofit institutions;

(3) contracts for the construction and operation of federally owned facilities;

(4) Federal purchases or guaranteed price of the products of demonstration plants or activities consistent with the provisions of subsection (c) of the section;

(5) Federal loans to non-Federal entities conducting demonstrations of new technologies; and

(6) incentives, including financial awards, to individual inventors, such incentives to be designed to encourage the participation of a large number of such inventors.

(b) Joint Federal-industry corporations proposed for congressional authorization pursuant to this Act shall be subject to the pro-

visions of section 9 of this Act and shall conform to the following guidelines except as otherwise authorized by Congress:

(1) Each such corporation may design, construct, operate, and maintain one or more experimental, demonstration, or commercial-size facilities, or other operations which will ascertain the technical, environmental, and economic feasibility of a particular energy technology. In carrying out this function, the corporation shall be empowered, either directly or by contract, to utilize commercially available technologies, perform tests, or design, construct, and operate pilot plants, as may be necessary for the design of the full-scale facility.

(2) Each corporation shall have—

(A) a Board of nine directors consisting of individuals who are citizens of the United States, of whom one shall be elected annually by the Board to serve as Chairman. The Board shall be empowered to adopt and amend bylaws. Five members of the Board shall be appointed by the President of the United States, by and with the advice and consent of the Senate, and four members of the Board shall be appointed by the President on the basis of recommendations received by him from any non-Federal entity or entities entering into contractual arrangements to participate in the corporation;

(B) a President and such other officers and employees as may be named and appointed by the Board (with the rates of compensation of all officers and employees being fixed by the Board); and

(C) the usual powers conferred upon corporations by the laws of the District of Columbia.

(3) An appropriate time interval, not to exceed 12 years, shall be established for the term of Federal participation in the corporation, at the expiration of which the Board of Directors shall take such action as may be necessary to dissolve the corporation or otherwise terminate Federal participation and financial interests. In carrying out such dissolution, the Board of Directors shall dispose of all physical facilities of the corporation in such manner and subject to such terms and conditions as the Board determines are in the public interest and consistent with existing law; and a share of the appraised value of the corporate assets proportional to the Federal participation in the corporation, including the proceeds from the disposition of such facilities, on the date of its dissolution, after satisfaction of all its legal obligations, shall be made available to the United States and deposited in the Treasury of the United States as miscellaneous receipts. All patent rights of the corporation shall, on such date of dissolution, be vested in the Administrator: Provided, That Federal participation may be terminated prior to the time established in the authorizing Act upon recommendation of the Board of Directors.

(4) Any commercially valuable product produced by demonstration facilities shall be disposed of in such manner and under such terms and conditions as the corporation shall prescribe. All revenues received by the corporation from the sale of such prod-

ucts shall be available to the corporation for use by it in defraying expenses incurred in connection with carrying out its functions to which this Act applies.

(5) The estimated Federal share of the construction, operation, and maintenance cost over the life of each corporation shall be determined in order to facilitate a single congressional authorization of the full amount at the time of establishment of the corporation.

(6) The Federal share of the cost of each such corporation shall reflect (A) the technical and economic risk of the venture, (B) the probability of any financial return to the non-Federal participants arising from the venture, (C) the financial capability of the potential non-Federal participants, and (D) such other factors as the Administrator may set forth in proposing the corporation: Provided, That in no instance shall the Federal share exceed 90 per centum of the cost.

(7) (A) Prior to the establishment of any joint Federal-industry corporation pursuant to this Act, the Administrator shall submit to the Speaker of the House of Representatives and the President pro tempore of the Senate, and to the appropriate committees of the House of Representatives and the Senate a report setting forth in detail the consistency of the establishment of the corporation with the principles and directives set forth in section 5 and this section, and the proposed purpose and planned activities of the corporation.

(B) No such corporation shall be established unless previously authorized by specific legislation enacted by the Congress.

(c) Competitive systems of price supports proposed for Congressional authorization pursuant to this Act shall conform to the following guidelines:

(1) The Administrator shall determine the types and capacities of the desired full-scale commercial-size facility or other operation which would demonstrate the technical, environmental, and economic feasibility of a particular nonnuclear energy technology.

(2) The Administrator may award planning grants for the purpose of financing a study of the full cycle economic and environmental costs associated with the demonstration facility selected pursuant to paragraph (1) of this subsection. Such planning grants may be awarded to Federal and non-Federal entities including, but not limited to, industrial entities, universities, and nonprofit organizations. Such planning grants may also be used by the grantee to prepare a detailed and comprehensive bid to construct the demonstration facility.

(3) Following the completion of the studies pursuant to the planning grants awarded under paragraph (2) of this subsection, regarding each such potential price supported demonstration facility for which the Administrator intends to request congressional authorization, he shall invite bids from all interested parties to determine the minimum amount of Federal price support needed to construct the demonstration facility. The Administrator may designate one or more competing entities, each to construct one commercial demonstration facility. Such designation shall be made

on the basis of those entities' (A) commitment to construct the demonstration facility at the minimum level of Federal price supports, (B) detailed plan of environmental protection, and (C) proposed design and operation of the demonstration facility.

(4) The construction plans and actual construction of the demonstration facility, together with all related facilities, shall be monitored by the Environmental Protection Agency. If additional environmental requirements are imposed by the Administrator after the designation of the successful bidders and if such additional environmental requirements result in additional costs, the Administrator is authorized to renegotiate the support price to cover such additional costs.

(5) The estimated amount of the Federal price support for a demonstration facility's product over the life of such facility shall be determined by the Administrator to facilitate a single congressional authorization of the full amount of such support at the time of the designation of the successful bidders.

(6) No price support program shall be implemented unless previously authorized by specific legislation enacted by the Congress.

(d) Nothing in this section shall preclude Federal participation in, and support for, joint university-industry nonnuclear energy research efforts.

DEMONSTRATIONS

SEC. 8. (a) The Administrator is authorized to—

(1) identify opportunities to accelerate the commercial applications of new energy technologies, and provide Federal assistance for or participation in demonstration projects (including pilot plants demonstrating technological advances and field demonstrations of new methods and procedures, and demonstrations of prototype commercial applications for the exploration, development, production, transportation, conversion, and utilization of energy resources); and

(2) enter into cooperative agreements with non-Federal entities to demonstrate the technical feasibility and economic potential of energy technologies on a prototype or full-scale basis.

(b) In reviewing potential projects, the Administrator shall consider criteria including but not limited to—

(1) the anticipated, research, development, and application objectives to be achieved by the activities or facilities proposed;

(2) the economic, environmental, and societal significance which a successful demonstration may have for the national fuels and energy system;

(3) the relationship of the proposal to the criteria of priority set forth in section 5(b)(2);

(4) the availability of non-Federal participants to construct and operate the facilities or perform the activities associated with the proposal and to contribute to the financing of the proposal;

(5) the total estimated cost including the Federal investment and the probable time schedule;

(6) the proposed participants and the proposed financial contributions of the Federal Government and of the non-Federal participants; and

(7) *the proposed cooperative arrangement, agreements among the participants, and form of management of the activities.*

(c)(1) *A financial award under this section may be made only to the extent of the Federal share of the estimated total design and construction costs, plus operation and maintenance costs.*

(2) *For the purposes of this Act the non-Federal share may be in any form, including, but not limited to, lands or interests therein needed for the project or personal property or services, the value of which shall be determined by the Administrator.*

(d)(1) *The Administrator shall, within six months of enactment of this Act, promulgate regulations establishing procedures for submission of proposals to the Energy Research and Development Administration for the purposes of this Act. Such regulations shall establish a procedure for selection of proposals which—*

(A) *provides that projects will be carried out under such conditions and varying circumstances as will assist in solving energy extraction, transportation, conversion, conservation, and end-use problems of various areas and regions, under representative geological, geographic, and environmental conditions; and*

(B) *provides time schedules for submission of, and action on, proposal requests for the purposes of implementing the goals and objectives of this Act.*

(2) *Such regulations also shall specify the types and form of the information, data, and support documentation that are to be contained in proposals for each form of Federal assistance or participation set forth in subsection 7(a): Provided, That such proposals to the extent possible shall include, but not be limited to—*

(A) *specification of the technology;*

(B) *description of prior pilot plant operating experience with the technology;*

(C) *preliminary design of the demonstration plant;*

(D) *time tables containing proposed construction and operation plans;*

(E) *budget-type estimates of construction and operating costs;*

(F) *description and proof of title to land for proposed site, natural resources, electricity and water supply and logistical information related to access to raw materials to construct and operate the plant and to dispose of salable products produced from the plant;*

(G) *analysis of the environmental impact of the proposed plant and plans for disposal of wastes resulting from the operation of the plant;*

(H) *plans for commercial use of the technology if the demonstration is successful;*

(I) *plans for continued use of the plant if the demonstration is successful; and*

(J) *plans for dismantling of the plant if the demonstration is unsuccessful or otherwise abandoned.*

(3) *The Administrator shall from time to time review and, as appropriate, modify and repromulgate regulations issued pursuant to this section.*

(e) *If the estimate of the Federal investment with respect to construction costs of any demonstration project proposed to be established*

under this section exceeds \$50,000,000, no amount may be appropriated for such project except as specifically authorized by legislation hereafter enacted by the Congress.

(f) *If the total estimated amount of the Federal contribution to the construction cost of a demonstration project does not exceed \$50,000,000, the Administrator is authorized to proceed with the negotiation of agreements and implementation of the proposal subject to the availability of funds under the authorization of appropriations pursuant to section 16: Provided, That if such Federal contribution to the construction cost is estimated to exceed \$25,000,000 the Administrator shall provide a full and comprehensive report on the proposed demonstration project to the appropriate committees of the Congress and no funds may be expended for any agreement under the authority granted by this section prior to the expiration of sixty calendar days (not including any day on which either House of Congress is not in session because of an adjournment of more than three calendar days to a day certain) from the date on which the Administrator's report on the proposed project is received by the Congress. Such reports shall contain an analysis of the extent to which the proposed demonstration satisfies the criteria specified in subsection (b) of this section.*

PATENT POLICY

SEC. 9. (a) *Whenever any invention is made or conceived in the course of or under any contract of the Administration, other than nuclear energy research, development, and demonstration pursuant to the Atomic Energy Act of 1954 (42 U.S.C. 2011 et seq.) and the Administrator determines that—*

(1) *the person who made the invention was employed or assigned to perform research, development, or demonstration work and the invention is related to the work he was employed or assigned to perform, or that it was within the scope of his employment duties, whether or not it was made during working hours, or with a contribution by the Government of the use of Government facilities, equipment, materials, allocated funds, information proprietary to the Government, or services of Government employees during working hours; or*

(2) *the person who made the invention was not employed or assigned to perform research, development, or demonstration work, but the invention is nevertheless related to the contract or to the work or duties he was employed or assigned to perform, and was made during working hours, or with a contribution from the Government of the sort referred to in clause (1),*

title to such invention shall vest in the United States, and if patents on such invention are issued they shall be issued to the United States, unless in particular circumstances the Administrator waives all or any part of the rights of the United States to such invention in conformity with the provisions of this section.

(b) *Each contract entered into by the Administration with any person shall contain effective provisions under which such person shall furnish promptly to the Administration a written report containing full and complete technical information concerning any invention, discovery, improvement, or innovation which may be made in the course of or under such contract.*

(c) Under such regulations in conformity with the provisions of this section as the Administrator shall prescribe, the Administrator may waive all or any part of the rights of the United States under this section with respect to any invention or class of inventions made or which may be made by any person or class of persons in the course of or under any contract of the Administration if he determines that the interests of the United States and the general public will best be served by such waiver. The Administration shall maintain a publicly available, periodically updated record of waiver determinations. In making such determinations, the Administrator shall have the following objectives:

(1) Making the benefits of the energy research, development, and demonstration program widely available to the public in the shortest practicable time.

(2) Promoting the commercial utilization of such inventions.

(3) Encouraging participation by private persons in the Administration's energy research, development, and demonstration program.

(4) Fostering competition and preventing undue market concentration or the creation or maintenance of other situations inconsistent with the antitrust laws.

(d) In determining whether a waiver to the contractor at the time of contracting will best serve the interests of the United States and the general public, the Administrator shall specifically include as considerations—

(1) the extent to which the participation of the contractor will expedite the attainment of the purposes of the program;

(2) the extent to which a waiver of all or any part of such rights in any or all fields of technology is needed to secure the participation of the particular contractor;

(3) the extent to which the contractor's commercial position may expedite utilization of the research, development, and demonstration program results;

(4) the extent to which the Government has contributed to the field of technology to be funded under the contract;

(5) the purpose and nature of the contract, including the intended use of the results developed thereunder;

(6) the extent to which the contractor has made or will make substantial investment of financial resources or technology developed at the contractor's private expense which will directly benefit the work to be performed under the contract;

(7) the extent to which the field of technology to be funded under the contract has been developed at the contractor's private expense;

(8) the extent to which the Government intends to further develop to the point of commercial utilization the results of the contract effort;

(9) the extent to which the contract objectives are concerned with the public health, public safety, or public welfare;

(10) the likely effect of the waiver on competition and market concentration; and

(11) in the case of a nonprofit educational institution, the extent to which such institution has a technology transfer capability and

program, approved by the Administrator as being consistent with the applicable policies of this section.

(e) In determining whether a waiver to the contractor or inventor of rights to an identified invention will best serve the interests of the United States and the general public, the Administrator shall specifically include as considerations paragraphs (4) through (11) of subsection (d) as applied to the invention, and—

(1) the extent to which such waiver is a reasonable and necessary incentive to call forth private risk capital for the development and commercialization of the invention; and

(2) the extent to which the plans, intentions, and ability of the contractor or inventor will obtain expeditious commercialization of such invention.

(f) Whenever title to an invention is vested in the United States, there may be reserved to the contractor or inventor—

(1) a revocable or irrevocable nonexclusive, paid-up license for the practice of the invention throughout the world; and

(2) the rights to such invention in any foreign country where the United States has elected not to secure patent rights and the contractor elects to do so, subject to the rights set forth in paragraphs (2), (3), (6), and (7) of subsection (h): Provided, That when specifically requested by the Administration and three years after issuance of such a patent, the contractor shall submit the report specified in subsection (h)(1) of this section.

(g)(1) Subject to paragraph (2) of this subsection, the Administrator shall determine and promulgate regulations specifying the terms and conditions upon which licenses may be granted in any invention to which title is vested in the United States.

(2) Pursuant to paragraph (1) of this subsection, the Administrator may grant exclusive or partially exclusive licenses in any invention only if, after notice and opportunity for hearing, it is determined that—

(A) the interests of the United States and the general public will best be served by the proposed license, in view of the applicant's intentions, plans, and ability to bring the invention to the point of practical or commercial applications;

(B) the desired practical or commercial applications have not been achieved, or are not likely expeditiously to be achieved, under any nonexclusive license which has been granted, or which may be granted, on the invention;

(C) exclusive or partially exclusive licensing is a reasonable and necessary incentive to call forth risk capital and expenses to bring the invention to the point of practical or commercial applications; and

(D) the proposed terms and scope of exclusivity are not substantially greater than necessary to provide the incentive for bringing the invention to the point of practical or commercial applications and to permit the licensee to recoup its costs and a reasonable profit thereon.

Provided, That, the Administrator shall not grant such exclusive or partially exclusive license if he determines that the grant of such license will tend substantially to lessen competition or result in undue concentration in any section of the country in any line of commerce

to which the technology to be licensed relates. The Administration shall maintain a publicly available, periodically updated record of determinations to grant such licenses.

(h) Each waiver of rights or grant of an exclusive or partially exclusive license shall contain such terms and conditions as the Administrator may determine to be appropriate for the protection of the interests of the United States and the general public, including provisions for the following:

(1) Periodic written reports at reasonable intervals, and when specifically requested by the Administration, on the commercial use that is being made or is intended to be made of the invention.

(2) At least an irrevocable, nonexclusive, paid-up license to make, use, and sell the invention throughout the world by or on behalf of the United States (including any Government agency) and States and domestic municipal governments, unless the Administrator determines that it would not be in the public interest to acquire the license for the States and domestic municipal governments.

(3) The right in the United States to sublicense any foreign government pursuant to any existing or future treaty or agreement if the Administrator determines it would be in the national interest to acquire this right.

(4) The reservation in the United States of the rights to the invention in any country in which the contractor does not file an application for patent within such time as the Administration shall determine.

(5) The right in the Administrator to require the granting of a nonexclusive, exclusive, or partially exclusive license, to a responsible applicant or applicants, upon terms reasonable under the circumstances, (A) to the extent that the invention is required for public use by governmental regulations, or (B) as may be necessary to fulfill health, safety, or energy needs, or (C) for such other purposes as may be stipulated in the applicable agreement.

(6) The right in the Administrator to terminate such waiver or license in whole or in part unless the recipient of the waiver or license demonstrates to the satisfaction of the Administrator that he has taken effective steps, or within a reasonable time thereafter is expected to take such steps, necessary to accomplish substantial utilization of the invention.

(7) The right in the Administrator, commencing three years after the grant of a license and four years after a waiver is effective as to an invention, to require the granting of a nonexclusive or partially exclusive license to a responsible applicant or applicants, upon terms reasonable under the circumstances, and in appropriate circumstances to terminate the waiver or license in whole or in part, following a hearing upon notice thereof to the public, upon a petition by an interested person justifying such hearing—

(A) if the Administrator determines, upon review of such material as he deems relevant, and after the recipient of the waiver or license, or other interested person, has had the

opportunity to provide such relevant and material information as the Administrator may require, that such waiver or license has tended substantially to lessen competition or to result in undue concentration in any section of the country in any line of commerce to which the technology relates; or

(B) unless the recipient of the waiver or license demonstrates to the satisfaction of the Administrator at such hearing that he has taken effective steps, or within a reasonable time thereafter is expected to take such steps, necessary to accomplish substantial utilization of the invention.

(i) The Administrator shall provide an annual periodic notice to the public in the Federal Register, or other appropriate publication, of the right to have a hearing as provided by subsection (h) (7) of this section, and of the availability of the records of determinations provided in this section.

(j) The Administrator shall, in granting waivers or licenses, consider the small business status of the applicant.

(k) The Administrator is authorized to take all suitable and necessary steps to protect any invention or discovery to which the United States holds title, and to require that contractors or persons who acquire rights to inventions under this section protect such inventions.

(l) The Administration shall be considered a defense agency of the United States for the purpose of chapter 17 of title 35 of the United States Code.

(m) As used in this section—

(1) the term "person" means any individual, partnership, corporation, association, institution, or other entity;

(2) the term "contract" means any contract, grant, agreement, understanding, or other arrangement, which includes research, development, or demonstration work, and includes any assignment, substitution of parties, or subcontract executed or entered into thereunder;

(3) the term "made", when used in relation to any invention, means the conception or first actual reduction to practice of such invention;

(4) the term "invention" means inventions or discoveries, whether patented or unpatented; and

(5) the term "contractor" means any person having a contract with or on behalf of the Administration.

(n) Within twelve months after the date of the enactment of this Act, the Administrator with the participation of the Attorney General, the Secretary of Commerce, and other officials as the President may designate, shall submit to the President and the appropriate congressional committees a report concerning the applicability of existing patent policies affecting the programs under this Act, along with his recommendations for amendments or additions to the statutory patent policy, including his recommendations on mandatory licensing, which he deems advisable for carrying out the purposes of this Act.

RELATIONSHIP TO ANTITRUST LAWS

SEC. 10. (a) Nothing in this Act shall be deemed to convey to any individual, corporation, or other business organization immunity from

civil or criminal liability, or to create defenses to actions, under the antitrust laws.

(b) As used in this section, the term "antitrust law" means—

(1) the Act entitled "An Act to protect trade and commerce against unlawful restraints and monopolies", approved July 2, 1890 (15 U.S.C. 1 et seq.), as amended;

(2) the Act entitled "An Act to supplement existing laws against unlawful restraints and monopolies, and for other purposes", approved October 15, 1914 (15 U.S.C. 12 et seq.) as amended;

(3) the Federal Trade Commission Act (15 U.S.C. 41 et seq.), as amended;

(4) sections 73 and 74 of the Act entitled "An Act to reduce taxation, to provide revenue for the Government, and for other purposes", approved August 27, 1894 (15 U.S.C. 8 and 9), as amended; and

(5) the Act of June 19, 1936, chapter 592 (15 U.S.C. 13, 13a, 13b, and 21a).

ENVIRONMENTAL EVALUATION

SEC. 11. (a) The Council on Environmental Quality is authorized and directed to carry out a continuing analysis of the effect of application of nonnuclear energy technologies to evaluate—

(1) the adequacy of attention to energy conservation methods; and

(2) the adequacy of attention to environmental protection and the environmental consequences of the application of energy technologies.

(b) The Council on Environmental Quality, in carrying out the provisions of this section, may employ consultants or contractors and may by fund transfer employ the services of other Federal agencies for the conduct of studies and investigations.

(c) The Council on Environmental Quality shall hold annual public hearings on the conduct of energy research and development and the probable environmental consequences of trends in the development and application of energy technologies. The transcript of the hearings shall be published and made available to the public.

(d) The Council on Environmental Quality shall make such reports to the President, the Administrator, and the Congress as it deems appropriate concerning the conduct of energy research and development. The President as a part of the annual Environmental Policy Report required by section 201 of the National Environmental Policy Act of 1969 (42 U.S.C. 4341) shall set forth the findings of the Council on Environmental Quality concerning the probable environmental consequences of trends in the development and application of energy technologies.

ACQUISITION OF ESSENTIAL MATERIALS

SEC. 12. (a) The President may, by rule or order, require the allocation of, or the performance under contracts or orders (other than contracts of employment) relating to, supplies of materials and equipment if he finds that—

(1) such supplies are scarce, critical, and essential to carry out the purposes of this Act; and

(2) such supplies cannot reasonably be obtained without exercising the authority granted by this section.

(b) The President shall transmit any rule or order proposed under subsection (a) of this section (bearing an identification number) to each House of Congress on the date on which it is proposed. If such proposed rule or order is transmitted to the Congress such proposed rule or order shall take effect at the end of the first period of thirty calendar days of continuous session of Congress after the date on which such proposed rule or order is transmitted to it unless, between the date of transmittal and the end of the thirty day period, either House passes a resolution stating in substance that such House does not favor such a proposed rule or order.

WATER RESOURCE EVALUATION

SEC. 13. (a) At the request of the Administrator, the Water Resources Council shall undertake assessments of water resource requirements and water supply availability for any nonnuclear energy technology and any probable combinations of technologies which are the subject of Federal research and development efforts authorized by this Act, and the commercial development of which could have significant impacts on water resources. In the preparation of its assessment, the Council shall—

(1) utilize to the maximum extent practicable data on water supply and demand available in the files of member agencies of the Council;

(2) collect and compile any additional data it deems necessary for complete and accurate assessments;

(3) give full consideration to the constraints upon availability imposed by treaty, compact, court decree, State water laws, and water rights granted pursuant to State and Federal law;

(4) assess the effects of development of such technology on water quality;

(5) include estimates of cost associated with production and management of the required water supply, and the cost of disposal of waste water generated by the proposed facility or process;

(6) assess the environmental, social, and economic impact of any change in use of currently utilized water resource that may be required by the proposed facility or process; and

(7) consult with the Council on Environmental Quality.

(b) For any proposed demonstration project which may involve a significant impact on water resources, the Administrator shall, as a precondition of Federal assistance to that project, prepare or have prepared an assessment of the availability of adequate water resources. A report on the assessment shall be published in the Federal Register for public review thirty days prior to the expenditure of Federal funds on the demonstration.

(c) For any proposed Federal assistance for commercial application of energy technologies pursuant to this Act, the Water Resource Council shall, as a precondition of such Federal assistance, provide to the Administrator an assessment of the availability of adequate water resources for such commercial application and an evaluation of the environmental, social, and economic impacts of the dedication of water to such uses.

(d) Reports of assessments and evaluations prepared by the Council pursuant to subsections (a) and (c) shall be published in the Federal Register and at least ninety days shall be provided for public review and comment. Comments received shall accompany the reports when they are submitted to the Administrator and shall be available to the public.

(e) The Council shall include a broad survey and analysis of regional and national water resource availability for energy development in the biennial assessment required by section 102(a) of the Water Resources Planning Act (42 U.S.C. 1962a-1(a)).

ENERGY-RELATED INVENTIONS

SEC. 14. The National Bureau of Standards shall give particular attention to the evaluation of all promising energy-related inventions, particularly those submitted by individual inventors and small companies for the purpose of obtaining direct grants from the Administrator. The National Bureau of Standards is authorized to promulgate regulations in the furtherance of this section.

REPORTS TO CONGRESS

SEC. 15. (a) Concurrent with the submission of the President's annual budget to the Congress, the Administrator shall submit to the Congress each year—

(1) a report detailing the activities carried out pursuant to this Act during the preceding fiscal year;

(2) a detailed description of the comprehensive plan for nuclear and nonnuclear energy research, development, and demonstration then in effect under section 6(a); and

(3) a detailed description of the comprehensive nonnuclear research, development, and demonstration program then in effect under section 6(b) including its program elements and activities, setting forth such modifications in the comprehensive plan referred to in clause (2) and the comprehensive program referred to in clause (3) as may be necessary to revise appropriately such plan and program in the light of the activities referred to in clause (1) and any changes in circumstances which may have occurred since the last previous report under this subsection.

(b) The description of the comprehensive nonnuclear research, development, and demonstration program submitted under subsection (a) (2) shall include a statement setting forth—

(1) the anticipated research, development, and application objectives to be achieved by the proposed program;

(2) the economic, environmental, and societal significance which the proposed program may have;

(3) the total estimated cost of individual program items;

(4) the estimated relative financial contributions of the Federal Government and non-Federal participants in the research and development program;

(5) the relationship of the proposed program to any Federal national energy or fuel policies; and

(6) the relationship of any short-term undertakings and expenditures to long-range goals.

(c) The reports required by subsections (a) and (b) of this section will satisfy the reporting requirements of section 307(a) of the Energy Reorganization Act of 1974 (Public Law 93-438) insofar as is concerned activities, goals, priorities, and plans of the Energy Research and Development Administration pertaining to nonnuclear energy.

APPROPRIATION AUTHORIZATION

SEC. 16. (a) There may be appropriated to the Administrator to carry out the purposes of this Act such sums as may be authorized in annual authorization Acts.

(b) Of the amounts appropriated pursuant to subsection (a) of this section—

(1) \$500,000 annually shall be made available by fund transfer to the Council on Environmental Quality for the purposes authorized by section 11; and

(2) not to exceed \$1,000,000 annually shall be made available by fund transfer to the Water Resources Council for the purposes authorized by section 13.

(c) There also may be appropriated to the Administrator by separate Acts such amounts as are required for demonstration projects for which the total Federal contribution to construction costs exceeds \$50,000,000.

And the House agree to the same.

That the Senate recede from its disagreement to the amendment of the House to the title of the bill and agree to the same.

MORRIS K. UDALL,
 JONATHAN B. BINGHAM,
 JOHN F. SEIBERLING,
 OLIN E. TEAGUE,
 MIKE McCORMACK,
 PHILIP E. RUPPE,
 JOHN DELLENBACK,
 CHARLES A. MOSHER,
Managers on the Part of the House.

HENRY M. JACKSON,
 LEE METCALF,
 J. BENNETT JOHNSTON, JR.,
 FLOYD K. HASKELL,
 GAYLORD NELSON,
 MARK O. HATFIELD,
 JAMES L. BUCKLEY,
 (BY MARK O. HATFIELD.)
 JAMES A. McCLURE,
 (BY MARK O. HATFIELD.)
Managers on the Part of the Senate.

JOINT EXPLANATORY STATEMENT OF THE COMMITTEE OF CONFERENCE

The managers, on the part of the Senate and the House at the conference on the disagreeing votes of the two Houses on the amendment of the House to the bill (S. 1283) to establish within the Energy Research and Development Administration a comprehensive non-nuclear energy research, development, and demonstration program to create the broadest range of future energy policy options for the United States, submit the following joint statement to the Senate and to the House in explanation of the effect of the action agreed upon by the managers and recommend in the accompanying conference report.

The House amendment to the text of the bill struck out all of the Senate bill after the enacting clause and inserted a substitute text.

The Senate recedes from its disagreement to the amendment of the House with an amendment which is a substitute for the Senate bill and the House amendment. The differences between the Senate bill, the House amendment, and the substitute agreed to in conference are noted below, except for clerical corrections, conforming changes made necessary by agreements reached by the conferees, and minor drafting and clarifying changes.

SHORT TITLE

The short title, "Federal Nonnuclear Energy Research and Development Act of 1974", follows the House amendment (section 1), because the Senate bill was passed in 1973 before the establishment of the Energy Research and Development Administration.

FINDINGS

The findings of the conference substitute are a compilation of key findings in the Senate bill and the House amendment. Subsections 2 (a), (d), and (e) are House amendments (subsections 1 (a), (g), and (d)). The Senate provision (subsection 101(b)) has been modified to more explicitly state the economic barrier to the development of new energy technologies and has been included as subsection 2(b). Subsection 2(c) is derived from subsection 101(e) of the Senate bill and subsection 1(f) of the House amendment. This finding retains the intent of the Senate language which stated a general target for Federal investment to provide budgetary guidance in establishing a nonnuclear research and development program. The agreed upon language, however, expresses the sense of the conferees that the figure is only approximate.

POLICY

Subsection 3(a) incorporates the introductory language of section 102 of the Senate bill with changes to reflect more recent views on

energy policy. The Senate version of the measure included a statement of the policy of the Congress "to develop within ten years the option and the technological capability for the United States to become energy self-sufficient through the use of domestic energy resources by socially and environmentally acceptable means." The House version contained no comparable provision. The conference committee wished to retain the sense of urgency expressed in the Senate version without prejudging the time span of the required accelerated research, development, and demonstration effort. The committee also wished to emphasize that the objective of this effort is to open up the broadest range of energy options for use in the formulation of future energy policy choices.

The House amendment (subsection 2(b)) is included as subsection 3(b) with only conforming and technical changes.

DUTIES AND AUTHORITIES OF THE ADMINISTRATOR

House amendment (subsection 4(a)) is included without change as subsection 4(a). Subsection 4(b) incorporates the introductory language of subsection 104(b) of the Senate bill and refers to other energy technology programs established by legislation, and makes clear that those programs in specific nonnuclear technologies are to be implemented by the Administrator. The provisions of subsections 104(c) (2) and 104(d) from the Senate bill are included as subsections 4(c) and 4(d) with only conforming and technical changes. Subsection 4(e) gives to the Administrator the authority to initiate demonstration programs and is based on subsection 106(a) of the Senate bill.

GOVERNING PRINCIPLES

Section 5 follows section 3 of the House amendment, which enunciates a set of governing principles. The enumeration is not intended to include all of the principles which might be applicable, but only to emphasize certain principles which are presently deemed to be of fundamental importance to a sound program. The intent is to insure that the five principles which are set forth in subsection 5(a) are observed in the design and execution of Federal nonnuclear energy research programs.

The principle set forth in paragraph 5(a) (4) states the importance of emphasizing research, development, and commercial demonstration of technologies which utilize renewable or essentially inexhaustible energy sources as distinguished from nonrenewable energy resources, because the most desirable sources of conventional fossil fuels are in limited supply. As continued demands are placed upon them, further development often will entail greater costs and more serious adverse environmental and social impacts. Ultimately some fossil fuels will be substantially exhausted. Therefore, it is important for research to be immediately directed toward developing technologies for the economic and reliable use of non-conventional as well as renewable energy sources such as solar or solar generated energy forms and essentially inexhaustible energy sources such as deep, dry geothermal energy.

The intent of the principle stated in paragraph 5(a) (5) is that in the assignment of priorities for Federal encouragement of commercial

applications of new energy technologies, consideration should be given to the net, as opposed to the gross, energy yield. The processes and facilities necessary to produce energy also consume energy, and in the case of certain technologies, this consumption may account for a substantial portion of the potential yield of the energy resource. Efficiency in every step of energy production, transmission, and utilization is important.

The conferees recognize that in the early research or development phases of new technologies, the projected applications may even involve a net loss of energy. This principle is not intended in any way to deter such research or to deter the demonstration of new technologies which are not energy efficient or cost effective in the early stages of development.

The principle in paragraph 5(b) (1) is derived from paragraph 2(b) (6) of the House amendment. The criteria set forth in paragraph 5(b) (2) are those enumerated in section 112 of the Senate bill with changes in the introductory language to express the view of the conference committee that criteria for evaluating proposals are not limited to those in the subsection. For proposals for which two or more criteria are in conflict, the Administrator is expected to base his judgments on an evaluation of the criteria in the aggregate.

COMPREHENSIVE PLANNING AND PROGRAMMING

This section is related to section 107 of the Senate bill and subsections 4 (b), (d), and (e) of the House amendment. The Senate provision required three reports from the Administrator to Congress within six, twelve, and eighteen months. The three reports were intended to recommend specific programs to solve energy supply and associated environmental problems for the immediate and short-term (to the early 1980's), for the middle-term (the early 1980's to 2000), and for the long-term (beyond 2000), through the use of Federal assistance to accelerate the commercial demonstration of those energy technologies given in three corresponding lists.

The House amendment provisions required the formulation and reporting to Congress of a comprehensive nonnuclear strategy designed to advance the policies set forth in this Act. An extensive list of nonnuclear energy technologies was to be considered by the Administrator in allocating Federal moneys with emphasis to be placed on energy conservation, solar and geothermal technologies as well as advanced technologies in coal, oil, natural gas, and oil shale resources.

The conference committee substitute requires the Administrator to submit to Congress by June 30, 1975 a comprehensive plan for energy research, development, and demonstration to achieve solutions to energy supply system and associated environmental problems in the three time intervals delineated in the Senate bill. Based on this plan, the Administrator is required to formulate a comprehensive nonnuclear energy research, development, and demonstration program. The Administrator is directed to justify the assignment of a program activity pertaining to each technology to a specific time interval, and to substantiate the degree of emphasis accorded to each technology within the comprehensive program.

An extensive list of energy technologies is set forth in subsection 6(b) for inclusion in the comprehensive program. This list is comprised of those technologies given in section 107 of the Senate bill and subsections 4 (d) and (e) of the House amendment. Each of the listed technologies is to be thoroughly considered in the comprehensive program. It is intended that each technology will be carried through to commercial application only if preceding research and development results warrant. The energy conservation technologies were explicitly included to emphasize the sentiment of the conference committee for promoting strong Federal research, development, and demonstration programs, particularly those enumerated in this bill, to promote energy conservation technologies.

With regard to subparagraphs 6(b) (3) (A) (i) and (ii), the conference committee recognizes that this legislation is not the first to provide for research and development of technologies which will convert agricultural, municipal, and commercial waste into a useful source of energy or materials. The experiences of other Federal agencies in this area have convincingly demonstrated that the development and demonstration of technologies for the recovery of energy from waste do not guarantee the adoption of such technologies by the public or private sector.

Research, development, and demonstrations of technologies for the conversion of waste to energy or reuseable materials should be initiated by the Administrator only after consultation and coordination with the appropriate agencies having existing programs and statutory authorities with similar objectives. The conferees intend that ERDA projects for the development of technologies designed to convert waste and recover resources shall be planned and executed so as to augment and supplement the efforts by such other agencies in promising technologies which the Administrator determines are not otherwise being adequately investigated and developed.

Paragraphs 6(b) (4) and 6(b) (5) explicitly require the Administrator to invite and consider proposals and report his recommendations pertaining to the advisability of Federal assistance in the form of a joint Federal-industry corporation for producing natural gas substitutes and in the form of guaranteed prices for producing syncrude and liquid petroleum products from coal.

Paragraph 6(b) (16) is a modified version of section 104(b) (3) of the Senate bill. It is the intent of the provision to make clear that the Administrator of ERDA has the authority and responsibility to carry out research and development in scientific management methods which have applications to energy industries or energy technologies.

FORMS OF FEDERAL ASSISTANCE

Nearly all of the provisions in section 7 were included in the Senate bill (subsection 108(a), section 109, and section 110). The House amendment (section 5) added provisions for incentives to inventors (paragraphs 5(a) (1) (F)); for reports by the Administrator to the Congress and subsequent Congressional authorization of joint Federal-industry corporations (paragraph 5(b) (7) (A) and (B)) and for allowance of joint-university-industry nonnuclear energy research efforts (subsection 5(d)).

The House amendment was adopted by the conference committee with two additional modifications. A provision (paragraph 7(c) (6)) was added requiring Congressional authorization for any price support program thus making unnecessary the establishment of a price support fund in this measure. Also, the provision in subsection 7(b) was modified by the conference committee to make clear the intention that any joint Federal-industry corporations which may be proposed for Congressional authorization would be subject to the patent policy set forth in section 9 of the compromise version.

DEMONSTRATIONS

The Senate bill contained provisions pertaining to demonstration projects in section 106; subsections 108(b), (c), and (d); and section 111. No comparable provisions were included in the House amendment. The conference substitute adopts the Senate language with several modifications.

Subsection 8(a) is derived from section 106 of the Senate bill with a more concise and straight-forward statement of the Administrator's authority. The criteria of subsection 8(b) are taken from subsection 111(a) of the Senate bill. A change in the introductory language was made to require consideration of the criteria for all demonstration proposals.

The requirement for a report analyzing the extent to which proposed demonstrations met the stated criteria was moved to subsection 8(f). The language in subsections 8(c) and (d) is taken directly from subsections 108(b), (c), and (d) of the Senate bill. The provisions of subsection 8(c) are intended to apply only to cost-shared demonstrations. It is not intended to require single contracts to cover design, construction, operation, and maintenance of demonstration projects. The basic intent of this subsection is to prohibit payment of fees to the private cost sharers in demonstration projects. Subsection 8(c) is not intended to prohibit the Administrator from contracting on a fee basis for systems analysis or systems management support needed to assist in monitoring and protecting the Federal interests in projects pursued under this section. The subsection is also not intended to affect contracts in force prior to enactment of this Act or to inhibit cooperative efforts with universities or other nonprofit research organizations.

The language of subsection 8(e) is a restatement of the provision stated in subsection 111(c). Subsection 8(f) is essentially subsection 111(b) of the Senate bill with a new reporting requirement and an increase from \$10,000,000 to \$25,000,000 for the Federal contribution to the construction cost of a demonstration project before the Administrator must report to the Congress on a proposed project. The increase in this figure is a conference committee compromise.

PATENT POLICY

Section 9 represents a compromise between section 113 of the Senate bill which totally prohibited waiver of title and the granting of exclusive licenses with respect to government-sponsored technology and section 7 of the House bill which contained a study provision.

The section is supported by the sponsors of the Senate provision, the conference committee, and the Executive Branch.

The provisions are designed to meet the stated concerns underlying the absolute prohibition against waiver of title and exclusive licensing in the Senate bill, while satisfying the need for flexibility reflected in the House approach. Section 9 is intended to apply to all nonnuclear contracts of the Energy Research and Development Administration. Nuclear energy research, development, or demonstration contracts shall continue to be governed by the provisions of the Atomic Energy Act of 1954, as amended. Inclusion of substantive patent policy provisions represents the conclusions of the conference committee that it is necessary and appropriate for the Congress to delineate the basic and minimum considerations and conditions under which ERDA will carry out its patent policy with respect to Government-sponsored technology in an area critical to the welfare of the nation. The conference committee expects the Administrator to administer ERDA's patent responsibilities in a consistent and uniform manner and to harmonize its nuclear and nonnuclear patent policies to the extent feasible.

Section 9 adopts the basic structure of the patent policy of the National Aeronautics and Space Act, with some modifications derived from the Atomic Energy Act. The provisions provide for the Federal Government normally to retain title to inventions developed under ERDA contracts, and for the licensing of ERDA inventions normally to be granted on a nonexclusive basis. Authority to grant waivers and exclusive or partially exclusive licenses is vested in the Administrator to assure flexibility; but only in conformity with specific minimum considerations which have been adopted primarily from the NASA and AEC regulations, and the Presidential Patent Policy Statement. This flexibility permits—but does not require—the Administrator, under carefully delineated conditions, to grant exclusive rights to contractors or inventors in objectively appropriate circumstances. Government patent policy carried out under the NASA and AEC Acts and regulations, and the Presidential Patent Policy Statement with respect to energy technology, has resulted in relatively few waivers or exclusive licenses in comparison with the number of inventions involved. The conference committee expects that similar results will obtain under section 9.

Subsection (a) provides that title to inventions resulting from ERDA research, development, or demonstration contracts vest in the United States unless the Administrator waives rights thereto pursuant to other provisions of this section.

To assist the Administrator in expeditiously making available to the public the results of the program and in determining whether to waive any part of the rights in the United States, subsection (b) requires each contract entered into by the Administrator to provide for a prompt, complete report detailing inventions resulting therefrom.

Subsection (c) provides that before granting a waiver, the Administrator must determine that the interests of the United States and the general public will best be served thereby. In making such determination, he is to have as objectives making the benefits of ERDA's program widely available to the public, the promotion of the commercial

utilization of resulting inventions, the encouraging of participation by private persons in ERDA's programs, the fostering of competition, and the prevention of undue market concentration or the creation or maintenance of other situations inconsistent with antitrust law. The conference committee recognizes that there may be times when it is not possible to attain each of the objectives immediately and simultaneously for any one determination. The Administrator should, therefore, seek to reconcile these objectives in light of the overall purposes of the patent policy section. Over time, however, the conference committee believes each of these objectives can and should be attained.

In carrying out these objectives, the Administrator is authorized to grant a waiver either at the time of contracting or after identification of the invention without the necessity for a hearing. In determining whether a waiver will best serve the interests of the United States and the general public at the time of contracting, the Administrator is specifically required under subsection (d) to include as considerations paragraphs (1) through (11).

The enumerated criteria are designed to indicate certain basic considerations which should be considered. The conference committee recognizes that there may be occasions when application of the various considerations to a particular case could cause conflicting results. In those instances, the Administrator will have to reconcile the differences giving due regard to the overall purposes of the patent policy provisions. It is not intended that specific findings be made as to each and every consideration.

The Administrator is similarly authorized in subsection (e) to grant a waiver to a contractor or inventor after identification of an invention if he determines that the interests of the United States and the general public will best be served thereby. The Administrator is required to specifically include as considerations paragraphs (4) through (11) of subsection (d), and paragraphs (1) and (2) of subsection (e). As the invention will have been identified, the Administrator shall consider each of the enumerated criteria as it specifically applies to that invention.

Subsection (f) permits—but does not require—the Administrator to reserve to a contractor a revocable, or irrevocable, nonexclusive, paid-up license, and rights to patents in foreign countries, subject to enumerated safeguards. The conference committee recognizes that the general reservation of an irrevocable nonexclusive license may impact adversely on the grant of exclusive licenses under subsection (g). It is expected that the Administrator, therefore, will carefully exercise his discretion to grant an irrevocable nonexclusive license.

With respect to the granting of exclusive licenses, the Administrator may (but is not required to) grant such licenses under subsection (g) only if he determines, after notice and opportunity for hearing, that the criteria specified in subsection (g) are satisfied.

The Administrator is authorized and directed under subsection (h) to include in each waiver of rights or grant of an exclusive or partially exclusive license such terms and conditions as may be appropriate for the protection of the interests of the United States and the general public. Subsections (h) (1) through (h) (7) enumerate certain minimum safeguards which he must include.

Subsections (i), (j), (k), and (l), respectively, provide for an annual periodic notice to the public of the right to the hearing provided in subsection (h) (7), and the availability of the records of determination provided for by this section; consideration of the small business status of an applicant in granting waivers or licenses; the taking of all suitable and necessary steps to protect any invention or discovery to which the United States holds title; and the placing of ERDA under the provisions of chapter 17, title 35.

Subsection (m) is the definitional section. Subsection (m) (2), which defines contract as including "other arrangement," is intended to encompass any and all other arrangements. The reference to section 9 in section 7 is intended to make this clear.

The reference in subsection (d) (11) to nonprofit educational institutions with approved technology transfer capabilities and programs is included among other reasons to assure that these institutions would not be disqualified from consideration for a waiver due to a lack of established commercial position or manufacturing capability. The approval requirement in the subsection is designed to assure that such institutions do not become a conduit for avoidance of the safeguards provided throughout the section. There is no intention for other nonprofit or research institutions to meet any lesser standard than required of other applicants.

Subsections (c) (4), (d) (10), (g) (2), and (h) (7) (A) contain references to competitive principles to be followed by the Administrator in the manner, and in accordance with the procedures, indicated in those subsections. These principles embrace existing legal concepts. The conference committee shares the President's concern that the effect of Executive Branch agency decisions should not be to interfere with or to affect adversely or unnecessarily our free market economy, and intends that this section be construed in a manner consistent with our fundamental national economic policy of fostering free competitive enterprise. The four references to these principles are intended to be construed harmoniously, reflecting judicial construction of the language from which they are derived, and their objective is to prevent situations before they reach the effects our antitrust law is meant to prevent. The phrase "preventing . . . the creation or maintenance of other situations inconsistent with the antitrust laws" is derived from section 105 of the Atomic Energy Act. The phrases "tend substantially to lessen competition" and "undue concentration" are derived from section 7 of the Clayton Act. They are intended to incorporate, in a non-merger context, judicial construction of these concepts. These provisions are meant to check a tendency toward undue concentration before the harmful effect occurs. In considering these antitrust aspects, it is not intended that the Administrator supplant the high level effort expended by the Justice Department or the Federal Trade Commission. The intensive job of ferreting out antitrust violations is beyond ERDA's capability and mission; and it is not intended that ERDA undertake the elaborate type of evidentiary record generally required in an antitrust proceeding. For the purpose of subsection (h) (7), the Administration is intended to be considered an "interested person."

Subsection 9(n) reflects the conferees' concern for harmonizing the patent policies within ERDA. For example, nuclear programs will continue to follow the patent policy of the Atomic Energy Act while

nonnuclear programs will follow the patent policy of section 9. This arrangement is likely to result in some anomalies. Thus, the conferees believed it prudent to include a study of the Federal patent policies affecting ERDA's programs. The conferees believe that section 9 will establish a workable patent policy until the study or experience demonstrates a need for revision.

The study will also investigate the desirability of mandatory licensing. The report resulting from that study should contain empirical data, in addition to opinions and conclusions. It also would be useful for the report to analyze the effect on research and development activity of existing legislative and judicial mandatory licensing provisions.

The study is to be undertaken by the Administrator with participation of other Federal agencies. The purpose of listing the Attorney General and the Secretary of Commerce is to assure that the views of those departments are available to the Congress. If there are differences of opinion between the agencies, the report should reflect the different views with dissenting or individual views where appropriate. The Administrator should also make allowance for input from interested non-Federal parties. One approach might be to hold public hearings from which the Administrator can better assess the public's concerns.

The study will be referred to the appropriate Congressional committees. Several committees have an interest in this area. Although the study will not necessarily lead to changes in our patent laws *per se* (title 35 of the United States Code), nevertheless, copies of it should be forwarded to both House and Senate Judiciary Committees. The specific responsibility for the ERDA patent policy rests in the committees with legislative jurisdiction over ERDA. These latter committees are expected to give due consideration to any suggestions which the Judiciary Committees may make regarding the report, and the Senate conferees believe that consideration of the report in the Senate should be with the full participation of the Senate Judiciary Committee.

RELATIONSHIP TO ANTITRUST LAWS

Section 114 of the Senate bill assures that no act taken or condition reached, pursuant to this Act, is immunized or otherwise protected from the full applicability of antitrust law as defined in subsection 114(b). The House amendment (section 8) contained an identical provision. The conference substitute incorporates this language in section 10.

ENVIRONMENTAL EVALUATION

In section 120 of the Senate bill the Council on Environmental Quality is authorized and directed to carry out a continuing assessment of the progress of energy research and development to evaluate the adequacy of attention to energy conservation and environmental concerns. The House amendment (section 9) adopts the same language except for minor changes including the deletion of paragraph 120(a) (3). The House amendment was adopted.

ACQUISITION OF ESSENTIAL MATERIALS

Section 12 is a modified version of section 121 of the Senate bill. It provides authority for the President to require the priority allocation

of scarce materials which are found to be critical and essential for the performance of ERDA's responsibilities. There was no similar provision in the House amendment. The conference committee refined the language of the provision to require specific findings by the President as a prerequisite to the implementation of this authority and to set forth a procedure for Congressional review of rules or orders proposed pursuant to this section.

WATER RESOURCE EVALUATION

The provisions in section 13 are derived from section 10 and subsection 3(c) of the House amendment. There was no similar provision in the Senate bill. The conference substitute incorporates the language of section 10 with some modifications. The conference substitute directs the Water Resources Council to undertake assessments at the request of the Administrator. Studies or assessments of the availability of adequate water resources shall be performed as precondition for Federal assistance in demonstration plant projects and in commercial application of energy technologies as provided for in section 3(c) of the House amendment. All reports on the assessments of water availability are required to be printed in the Federal Register.

The conference committee modified section 10 of the House amendment to include the full range of legal constraints which apply to the consumptive use of water. The committee recognizes that the body of State and Federal law which protects water rights is vital to the social and economic stability of vast regions of the nation. It is essential that choices and decisions made concerning the future of national energy production give full consideration to the impacts which new energy developments will have upon water resources and indirectly upon other uses of water. State and Federal legal constraints upon the use of water must be observed in energy-related decisions to insure that they do not disrupt other equally important social objectives.

ENERGY-RELATED INVENTIONS

The language in section 105 of the Senate bill directed the National Science Foundation to evaluate promising energy-related inventions. There was no comparable provision in the House amendment. The conference substitute in section 14 follows the Senate provision but designates the National Bureau of Standards as the responsible agency. An office with similar functions for inventions in general has existed within NBS for over thirty years. The conference committee directs NBS to keep ERDA currently advised of promising inventions which should be considered for inclusion in the energy research, development, and demonstration programs.

REPORTS TO CONGRESS

The Senate bill contained in section 119 and subsection 122(c) provides for annual reports to Congress, including the activities of the previous calendar year. The House amendment (section 6) required an annual report no later than sixty days from the end of the fiscal year detailing the activities during the current fiscal year and no later than ninety legislative days prior to each fiscal year an annual report setting forth a detailed program for energy research and

development. Six general aspects of the program objectives and impact were required to be discussed in the report.

The conference substitute requires the Administrator to submit a report to the Congress concurrent with the submission of the President's annual budget to the Congress. The Administrator is directed to report the activities carried out pursuant to this Act during the preceding fiscal year and to revise annually the comprehensive energy research, development, and demonstration plan and the comprehensive nonnuclear energy research, development, and demonstration program prepared pursuant to section 6. The same six general aspects of the program objectives and impact are required to be addressed in the report. A provision was included to avoid duplication with the reporting requirements of the Energy Reorganization Act of 1974 relating to nonnuclear energy.

APPROPRIATION AUTHORIZATION

The appropriations provisions (subsections 122 (a) and (b)) of the Senate bill as passed were substantially outdated by the passage of the Energy Reorganization Act of 1974 and by the expenditures for nonnuclear energy research and development in the current fiscal year. Section 13 of the House amendment provided for authorization for appropriation to the Administrator only such sums as the Congress may hereafter authorize by law with fund transfers authorized for the Council on Environmental Quality and the Water Resources Council. The conference committee adopted these provisions as subsection 16 (a) and (b). The conference substitute provision in subsection 16(c) is a revision of subsection 13(c) of the House amendment to conform to the provisions of section 8 of the conference substitute.

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