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Public Law 93-575

AN ACT

December 31, 1974
[S. 3615]

To authorize the Secretary of the Interior to transfer certain lands in the State of Colorado to the Secretary of Agriculture for inclusion in the boundaries of the Arapaho National Forest, Colorado.

Arapaho National Forest, Colo.
Boundary extension.
16 USC 485 note.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, to insure consolidation of lands in the Arapaho National Forest, Colorado, and to afford the opportunity for better management of those lands, the Secretary of the Interior is hereby authorized to transfer certain lands under his jurisdiction and adjacent to the existing boundary of said national forest to the Secretary of Agriculture. Pursuant to this Act, the exterior boundaries of the Arapaho National Forest, Colorado, shall be extended to include all of the lands not presently within such boundaries lying in township 3 south, range 78 west, township 4 south, range 78 west, township 2 south, range 79 west, township 3 south, range 79 west, and township 2 south, range 80 west, sections 7 through 18, and sections 20 through 28, all of the sixth principal meridian.

Approved December 31, 1974.

Public Law 93-576

AN ACT

December 31, 1974
[H. R. 16609]

To amend Public Law 93-276 to increase the authorization for appropriations to the Atomic Energy Commission in accordance with section 261 of the Atomic Energy Act of 1954, as amended, and for other purposes.

Atomic Energy Commission.
Appropriations increase.
Ante, p. 116.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 101(a) of Public Law 93-276 is hereby amended by striking therefrom the figure "\$2,551,533,000" and substituting the figure "\$2,580,733,000".

SEC. 2. Section 101(b) of Public Law 93-276 is hereby amended by striking from subsection (11) capital equipment the figure "\$208,850,000" and substituting the figure "\$224,900,000".

SEC. 3. From the increase of the sums authorized to be appropriated by this Act \$23,000,000 shall be allotted to, and made available only for the Safeguards Program, with regard to the safeguarding of special nuclear materials from diversion from its intended uses, and for research and development of safeguards techniques and related activities involved in handling nuclear material.

Approved December 31, 1974.

Safeguards Program.

Public Law 93-577

AN ACT

December 31, 1974
[S. 1283]

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

Federal Non-nuclear Energy Research and Development Act of 1974.

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

SHORT TITLE

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

42 USC 5901 note.

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STATEMENT OF FINDINGS

SEC. 2. The Congress hereby finds that—

42 USC 5901.

(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.

42 USC 5902.

(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 non-nuclear 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).

Ante, p. 1069.

Ante, p. 1079.

Ante, p. 1431.

DUTIES AND AUTHORITIES OF THE ADMINISTRATOR

42 USC 5903.

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

42 USC 5904.

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

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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 proposed 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 of 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 Adminis-

Plan, transmittal to Congress.
42 USC 5905.
Ante, p. 1233.

Program, transmittal to Congress.

trator 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

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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.

Ante, p. 1079.

Ante, p. 1069.

Ante, p. 1431.

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

42 USC 5906.

Joint Federal-industry, corporations, guidelines.

(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 products 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

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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.

Report to Speaker of the House, President pro tempore, and congressional committees.

(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:

Price support systems, 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

42 USC 5907.

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.

Regulations.

(2) Such regulation information, data, and in proposals for each set forth in subsection (2) possible shall include

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SEC. 9. (a) Whenever the course of or under a nuclear energy research project the Atomic Energy Commission Administrator determines

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(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.

Report to congressional committees.

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—

42 USC 5908.

(1) the person who made the invention was employed or assigned to perform research, development, or demonstration

(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

Licenses, regulations.

Hearing.

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.

Waiver, terms
and conditions.

(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 material as he waiver or license opportunity to tion as the Ad license has ten result in undue in any line of

(B) unless t strates to the s ing that he has time thereafter accomplish sub

(i) The Administrator the public in the Federal of the right to have a hea section, and of the avail vided in this section.

(j) The Administrator sider the small business st

(k) The Administrator sary steps to protect any States holds title, and t acquire rights to inventio

(l) The Administrator United States for the pu States Code.

(m) As used in this sect

(1) the term "pers oration, association,

(2) the term "cont understanding, or ot development, or dem ment, substitution of into thereunder;

(3) the term "mad means the conception invention;

(4) the term "inv whether patented or u

(5) the term "cont with or on behalf of th

(n) Within twelve mon Act, the Administrator w eral, the Secretary of Con may designate, shall submi gressional committees a rep patent policies affecting th recommendations for amen policy, including his recom he deems advisable for ear

RELATION

SEC. 10. (a) Nothing in individual, corporation, or civil or criminal liability, antitrust laws.

(b) As used in this sectio

(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—

Publication in
Federal Register.

35 USC 181.
Definitions.

Report, submit-
tal to President
and congressional
committees.

42 USC 5909.

"Antitrust
law."

(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;

15 USC 58.

(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

42 USC 5910.

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.

Hearings.

(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.

Transcript, availability.

Report to President, Administrator, and Congress.

(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

42 USC 5911.

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

Proposed rule or order, transmittal to Congress.

rule or order shall take effect on the first calendar days of conference of such proposed rule on the date of transmittal a passes a resolution st such a proposed rule

SEC. 13. (a) At Resources Council s requirements and wat technology and any p the subject of Federa this Act, and the comm cant impacts on water the Council shall—

(1) utilize to t supply and dema the Council;

(2) collect and for complete and a

(3) give full co imposed by treat water rights gran

(4) assess the water quality;

(5) include est management of th of waste water g

(6) assess the any change in us be required by th

(7) consult wi

(b) For any prop a significant impact a precondition of Fed prepared an assessme A report on the asses for public review th funds on the demonst

(c) For any prop of energy techn Council shall, as a p to the Administrator water resources for of the environmental water to such uses.

(d) Reports of a cil pursuant to subse eral Register and a review and comment when they are subm to the public.

(e) The Council regional and nation opment in the bienn Water Resources Pl

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—

42 USC 5912.

(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.

Publication in
Federal Register.

(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.

Publication in
Federal Register.

(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

42 USC 5913.

Regulations.

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

42 USC 5914.

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.

Ante, p. 1251.

APPROPRIATION AUTHORIZATION

42 USC 5915.

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 fund transfer to the authorized by section

(c) There also may be rate Acts such amounts for which the total Federal \$50,000,000.

Approved December

Public Law 93-578

To relinquish and disclaim Secretary of the Interior to Arizona.

Be it enacted by the United States of America that the United States hereby disclaims all property situated in Yun the east half of the north east quarter and the north section 13; and the north the south half of the south range 21 east, San Bernardino plat of survey of such town surveyor General's Office, divisions 23, 25, and 26, town River meridian as depicted survey plat of said town of the Interior, Bureau except that the provisions portion of such property pursuant to the complaint on June 30, 1964, in the of Arizona (No. Civ. 51 submerged in the bed of of California and Arizona

SEC. 2. The Secretary convey by patent to Wisconsin corporation, 52 acres of quarter of the northwest northeast quarter of section Bernardino meridian as such township published Office, dated March 21, 1 north, range 24 west, Gi the dependent resurvey published by the United Land Management, date this section shall not apply described in the complaint on June 30, 1964, in the of Arizona (No. Civ. 51 submerged in the bed of of California and Arizona

SEC. 3. The Secretary