



601237

Department of Energy
Washington, D.C. 20461

July 18, 1980

Legislation

*see 4 or 5
pages down
for text*

NOTE TO STATE COMMERCIALIZATION TEAMS

You may be interested in a number of developments and activities pertaining to the geothermal commercialization effort. These are summarized below.

FY 1981 Budget

Specific budget levels are not yet available for FY 1981. However, it seems likely that the commercialization budget will be reduced, perhaps sharply. For the authorization, the House Science and Technology Committee has recommended \$7 million for the commercialization effort. This is a \$2 million decrease from the FY 1980 level. Pages 311 and 314-316 are attached. The House has not acted on this recommendation. The Senate Energy and Natural Resources Committee did not publish recommendations on the comparable bill (S. 2332). Instead, it has recommended that the Senate approve an authorization equal to the FY 1980 appropriation plus 10%. This would leave it to the Senate Appropriations Committee to allocate the increment. Floor action for this recommendation is scheduled for July 21, 1980.

For the appropriation, the House Committee on Appropriations has recommended a budget for operating expenses for the commercialization program of \$4 million. This compares with the \$9.86 million appropriated for FY 1980. Pages 14, 20, and 81 from the Committee report are attached. The appropriation bill, H.R. 7590 was passed by the House on June 25, 1980. An amendment was also passed that reduces by 2% the non-mandatory funding of the total budget authority provided in the bill. No action has yet been taken by the Senate Appropriations Committee.

The overall effect of the authorization and appropriations actions on the geothermal commercialization budget will depend in large measure on what results from the Committees of Conference. There is good reason to believe at present that the budget for FY 1981 will be austere.

New Geothermal Legislation

The President signed the "Energy Security Act" on June 30, 1981, which will be Public Law 96-294. The law has not yet been printed, but the text is the same as printed in the report of the Committee of Conference, House Report No. 96-1104. Enclosed is a copy of Title VI - Geothermal Energy, plus the accompanying Committee comments.

P. L. 96-294 specifies that a number of regulations and an assessment of reservoir insurance be completed by certain deadlines. Thus, even though there has been no appropriation, DOE must undertake a great deal of work within the next six months.

July 18, 1980

We are continuing the publication of the "Geothermal Progress Monitor". It is very important that you continue to provide news on federal or private activities in your State to the Operations Office or Regional Office that is designated. We want to assure that the information published is timely and accurate. If you are not receiving the Monitor routinely, please let me know.

If you have questions or comments on any of the above information, please call me (202-633-8760). I'd be happy to talk with you.

Bill Rice

William L. R. Rice
Division of Geothermal Energy
Resource Applications

cc: C. Nichols, IDO
T. Heenan, SAN
W. Gough, IX
R. Hackman, X

July 18, 1980

On June 24, 1980, the Senate passed S. 1388, an Act intended to "...effect a major overhaul of Federal geothermal leasing procedures to support a significant acceleration in the development of geothermal resources on Federal lands; ..." This must next be considered by the House.

On-Going Headquarters Activities

The Bonneville Power Administration has forecast power deficiencies in the Pacific northwest during the 1980's. Based on the BPA projections, a Pacific Northwest Energy Task Force was established in May, with Rudy Black as Chairman. The Task Force is presently preparing a report that will describe the anticipated shortfall and propose means of meeting the deficit. These will include conservation measures and alternatives for increasing supply. Emphasis will be on Federal actions, but the report will also identify steps that could be taken by others. Inputs for the Task Force report are being prepared, including a section on the contribution that geothermal energy could make.

A related activity is in progress that concerns DOE's power marketing administrations. On March 26, 1980, Deputy Secretary Sawhill requested that the power marketing administrations assess conservation and renewable resource activities that might be undertaken in their respective areas. A report, identifying specific projects, will be given to the Deputy Secretary at the end of this month. It will include specific projects leading to increased geothermal power production, one each in the marketing area of the Bonneville Power Administration and the Western Area Power Administration. The geothermal writeups are based on input provided by the state commercialization teams. If the projects are approved, they would be identified in the FY 1982 budget for funding. Both of the geothermal projects are essentially resource assessment/confirmation in nature.

We are working with the Department of Housing and Urban Development to identify potential geothermal direct applications projects that could be undertaken in distressed cities. Such cities qualify for Urban Development Action Grants based on the minimum standards for physical and economic distress. Where such cities are coincident with geothermal resources, we plan to assess whether specific projects could be identified and proposed to HUD for UDAG grants.

Reports

Enclosed is a copy of the "Fourth Annual Report - Geothermal Energy Research, Development and Demonstration Program". This was issued in June, 1980.

The Geothermal Resources Council has issued the following two reports:

- (1) "Direct Utilization of Geothermal Energy: A Technical Handbook", G.R.C. Special Report No. 7; and
- (2) "Commercial Uses of Geothermal Heat", G.R.C. Special Report No. 9.

DOE has just issued "Geothermal Energy as a Source of Electricity", by Ronald DiPippo, published January 1980. It is report DOE/RA/28320-1. It may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. The Stock Number is 061-000-00390-8.

96TH CONGRESS }
2d Session

HOUSE OF REPRESENTATIVES

{ REPT. 96-967
PART III

AUTHORIZING APPROPRIATIONS FOR THE DEPARTMENT OF ENERGY (DOE) FOR FISCAL YEAR 1981

REPORT

OF THE

COMMITTEE ON SCIENCE AND TECHNOLOGY

together with

ADDITIONAL AND DISSENTING VIEWS

[To accompany H.R. 6627]



MAY 14, 1980.—Ordered to be printed

SI-900 O

H. Geothermal and Hydroelectric Energy

1. GEOTHERMAL ENERGY

(In thousands of dollars)

	Fiscal year 1980 budget authority estimate	Fiscal year 1981 DOE authorization request	Revised Fiscal year 1981 DOE authorization request ¹	Quantitative action	
				Changes to original authorization request	Total authorization
Operating expenses:					
Hydrothermal energy.....	45,150	51,113		-10,500	40,613
Geopressured resources.....	33,700	35,800		0	35,800
Geothermal technology development.....	30,900	51,890		-10,000	41,890
Geothermal resources development fund.....	0	1,001		0	1,001
Subtotal, operating.....	119,750	139,804		-20,500	119,304
Program direction.....	1,962	2,569		0	2,569
Subtotal.....	121,712	141,179		-20,500	120,679
Capital equipment:					
Hydrothermal resources.....	800	0		0	0
Geopressured resources.....	300	200		0	200
Geothermal technology development.....	2,100	1,110		0	1,110
Subtotal, capital equipment.....	3,200	1,310		0	1,310
Construction:					
Authorization.....		10,911		8,000	18,911
Budget authority.....	24,450	10,911		8,000	18,911
Total, authorization.....		154,684		-12,500	141,911
Total budget authority.....	149,362	154,684		-12,500	141,911

¹ Indicates changes to original FY 1981 B/A request.

The function of the geothermal energy program is to accelerate commercial use of the abundant geothermal resources of the United States for electric power generation, direct heat uses, and production of methane (from geopressured resources). The DOE's role is to conduct reservoir assessment, research, development, and demonstration programs, and to assess and (in cooperation with other organizations) mitigate economic, legal, environmental and regulatory roadblocks to geothermal development.

Three types of geothermal resources have the potential to contribute to the Nation's energy economy by the year 2000. These are hydrothermal, geopressured, and hot dry rock resources. Hydrothermal resources consist of water and steam trapped in fractured rocks or porous sediments at moderate to high temperature. Geopressured resources consist of moderately hot water and methane under abnormally high pressures. Hot dry rock resources consist of moderate to high temperature rocks at accessible depths that are relatively unfractured and contain little water.

Of the three types, hydrothermal resources are most ready for commercialization, because more is known about them and because they can be used economically now. Cost reductions through improved tech-

(a) HYDROTHERMAL ENERGY

[In thousand of dollars]

	Fiscal year 1980 budget authority estimate	Fiscal year 1981 DOE authorization request	Revised Fiscal year 1981 DOE authorization request	Committee Action	
				Changes to original authorization request	Total authorization
Operating expenses:					
Hydrothermal commercialization:					
Planning and analysis.....	4,570	4,551	-----	-500	4,051
Private sector development.....	4,430	4,473	-----	-1,500	2,973
Hydrothermal resources:					
Resource definition.....	13,406	19,398	-----	-1,000	18,398
Non-electric applications.....	12,208	16,000	-----	-5,500	10,500
Environmental control.....	1,300	2,600	-----	0	2,600
Facilities:					
Valles Calders, SOMW.....	50	1,139	-----	0	1,139
Raft River pilot plant.....	4,452	2,452	-----	0	2,452
Geothermal loop experimental facility.....	500	0	-----	0	0
HGP-A wellhead generator.....	3,642	0	-----	0	0
Geothermal component test fa- cility.....	600	500	-----	0	500
General cut.....	-----	-----	-----	-2,000	-----
Subtotal, operating.....	45,150	51,113	-----	-10,500	40,613
Capital equipment.....	800	0	-----	0	0
Total, hydrothermal energy.....	45,950	51,113	-----	-10,500	40,613

HYDROTHERMAL COMMERCIALIZATION

Objectives

The major objective of this program element is to accelerate commercial use of hydrothermal resources for electric power and for direct heat applications so that geothermal energy can make a significant contribution to domestic energy production. The two subelements are Planning and Analysis and Private Sector Development.

Description

Planning and Analysis

Planning and Analysis activities are aimed at establishing hydrothermal program needs, priorities, and strategies. Analyses of the economics of geothermal energy use, market penetration, institutional and legal barriers, and federal policies support the planning function.

Under this subelement, DOE prepares commercial development plans on site-specific, regional, and national levels, and monitors progress toward hydrothermal commercialization objectives. DOE also supports the Interagency Geothermal Coordinating Council (IGCC), which provides a forum for the review and analysis of federal policies, regulations, and legislation that may affect geothermal commercialization. Analysis of barriers to commercialization is coupled with energy market studies to establish the market penetra-

tion potential of hydrothermal resources and to support the design of effective marketing strategies.

Private Sector Development

This subelement seeks to stimulate private sector development of hydrothermal resources through identification of site-specific commercial opportunities for direct heat applications and direct developer/user participation and cost-sharing in feasibility analyses and demonstration projects. The subelement also includes an outreach effort comprised of technical consultation with potential end users and information dissemination.

DOE is also working to stimulate private sector interest in geothermal direct heat applications by cooperating with industry in studies to determine technical and economic feasibility and market potential of geothermal direct use for pulp and paper manufacturing, district heating, food and mineral processing, and agricultural drying.

Significant Accomplishments to Date

In FY 1979 and FY 1980, geothermal energy market assessment studies were completed for 15 western states and 4 geothermal areas in the northeast. The assessment of four areas in the southeast will be accomplished by the end of this year. Market penetration analyses for each of the 10 Rocky Mountain Basin and Range states have identified a potential market penetration of .1 to .5 quads for direct heat application in these states. The operation of the National Progress Monitor for geothermal development began late in 1979.

Four centers established in Oregon, Idaho, Utah, and Maryland furnish technical consultation to prospective hydrothermal resource users and provide both information on hydrothermal resources and their applications and community assistance in development planning. As part of the geothermal outreach program, workshops were held in ten states to assist the legislatures to define legislative needs to foster geothermal development in their states.

Activity Highlights/Milestones

Planning and Analysis.—Site specific commercial development planning in 15 western states will be completed. Planning support for selected areas of the Atlantic Coastal Plain will continue for a second year. State legislative reviews in six additional states (for a total of 18) will identify legal barriers to geothermal development and to assist the states in developing mitigation measures. The National Progress Monitor will continue to measure the pace of commercial geothermal development. Support for the activities of the Inter-agency Geothermal Coordinating Council and the Geothermal Panel of the Energy Research Advisory Board will be continued.

Private Sector Development.—Market penetration analyses will continue to define the locations and sizes of markets for geothermal energy. Seven to nine new site-specific engineering and economic studies will emphasize industrial uses of geothermal direct heat. In addition, the technical assistance centers will continue to aid prospective resource developers. Information dissemination activities related to opportunities for direct utilization of geothermal energy will be strengthened.

COMMITTEE ACTION

Hydrothermal Commercialization—\$2.0 million decrease

The Committee added the \$10 million Hydrothermal Commercialization activity back into the Hydrothermal energy subprogram and reduced it by \$2 million. This activity was initiated as a result of the Geothermal Research, Development and Demonstration Act of 1974 and has, in the past, been funded as part of the RD&D budget. The Committee recognized that it was separated from the RD&D program primarily because the Department had separated the program direction for these activities between two assistant secretaries. The Department then recombined these activities under the direction of the Assistant Secretary for Resource Applications, but did so after the budget proposal had been prepared. Consequently, the funding was not recombined as it should have been. The \$2 million reduction consists of a \$0.5 million cut in barrier analysis for specific industries, and a \$1.5 million cut in new proposed pilot projects.

HYDROTHERMAL RESOURCES

Objectives

The major objective of the Hydrothermal Resources program element is to support the growing commercial development of this resource for electric power generation and direct heat applications. Subelements of this program element are Resource Definition, Non-Electric Applications, Environmental Control, and Facilities.

The Resource Definition subelement confirms hydrothermal reservoirs to assure sufficient fluid reserves to meet near-term utilization goals and identifies new prospects for long-term growth.

Non-Electric Applications projects demonstrate technical and economic feasibility of the direct use of hydrothermal energy by supporting cost-shared field experiments and related studies.

The Environmental Control subelement (1) develops and demonstrates technologies required to meet environmental, health, and safety standards for geothermal utilization at reasonable cost and (2) satisfies requirements of the National Environmental Policy Act for environmental impact analyses.

The Facilities subelement stimulates non-federal development of liquid-dominated hydrothermal resources for electric power generation through both pilot scale and commercial scale demonstrations of geothermal systems.

Description

Resource Definition

This subelement focuses on assessment of U.S. hydrothermal reservoirs and confirmation of hydrothermal prospects through selected drilling and testing projects. National and regional resource assessments are conducted in cooperation with the U.S. Geological Survey. DOE also cooperates with state agencies to identify and confirm low-to-moderate temperature reservoirs for direct heat applications, and with industry to confirm high temperature reservoirs with near-term commercial potential for electric power production.

96TH CONGRESS }
2d Session }

HOUSE OF REPRESENTATIVES

REPORT
No. 96-1093

**ENERGY AND WATER DEVELOPMENT APPROPRIATION
BILL, 1981**

June 16, 1980.—Committed to the Committee of the Whole House on the State
of the Union and ordered to be printed

Mr. BAYLIS, from the Committee on Appropriations,
submitted the following

REPORT

[To accompany H.R. 7590]

The Committee on Appropriations submits the following report
in explanation of the accompanying bill making appropriations for
energy and water development for the fiscal year ending Septem-
ber 30, 1981, and for other purposes.

Department of Energy

	FY 1980 Estimates	FY 1981 Budget Request	Committee Bill
ENERGY SUPPLY, RESEARCH AND DEVELOPMENT OPERATING EXPENSES			
Solar Energy			
Solar Applications			
System development.....	50,000,000	49,500,000	47,000,000
Market test and applications.....	30,950,000	30,000,000	46,000,000
Market development & training.....	24,300,000	39,500,000	27,000,000
Solar international applications.....	—	4,000,000	4,000,000
Program direction.....	2,341,000	2,786,000	2,786,000
Subtotal Solar Applications.....	107,591,000	133,786,000	126,786,000
Solar Technology			
Biosense			
Alcohol fuels.....	14,500,000	20,100,000	15,100,000
Other Biosense.....	37,000,000	47,650,000	47,650,000
Subtotal Biosense.....	51,500,000	67,750,000	62,750,000
Solar thermal electric power systems.....	72,905,000	92,550,000	90,100,000
Photovoltaics energy development.....	131,700,000	135,900,000	127,000,000
Wind energy conversion system.....	45,260,000	77,900,000	67,900,000
Wave systems.....	28,600,000	38,300,000	35,300,000
Solar international.....	—	11,000,000	8,000,000
Solar information systems.....	—	1,400,000	1,400,000
Program direction.....	1,688,000	4,000,000	4,000,000
Subtotal Solar Technology.....	333,653,000	415,900,000	386,450,000
Total Solar Energy.....	461,244,000	549,686,000	513,236,000
Geothermal			
Hydrothermal commercialization.....	9,860,000	10,000,000	4,000,000
Hydrothermal resources development.....	36,150,000	42,089,000	33,589,000
Geopressured resources development.....	33,700,000	35,800,000	33,800,000
Geothermal technology development.....	38,900,000	51,890,000	39,390,000
Program direction.....	1,102,000	1,400,000	1,400,000
Total Geothermal.....	121,712,000	141,179,000	114,179,000
Hydropower			
Small scale hydroelectric development.....	13,000,000	8,211,000	6,211,000
Feasibility studies loan program.....	10,000,000	10,000,000	10,000,000
Construction Loan Program.....	—	—	—
Program direction.....	844,000	789,000	789,000
Total Hydropower Projects.....	23,844,000	19,000,000	17,000,000
Nuclear Pileups			
Converter Reactors			
Thermal reactor technology.....	29,500,000	46,500,000	39,500,000
Thermal Reactor Fuel Cycle.....	19,500,000	—	21,500,000
High Temperature Reactors.....	25,000,000	—	40,000,000
Advanced reactor systems.....	4,700,000	3,000,000	1,000,000
Program direction.....	1,296,000	1,465,000	1,465,000
Total Converter Reactors.....	79,996,000	50,965,000	103,465,000
Commercial Nuclear Waste Management			
Terminal isolation research and development.....	139,150,000	192,939,000	137,439,000
Waste treatment technology.....	14,200,000	17,430,000	14,850,000
Support programs.....	1,600,000	7,500,000	1,500,000
Program direction.....	1,365,000	1,762,000	1,762,000
Total Commercial Nuclear Waste Management.....	156,315,000	219,631,000	175,551,000
Interim Spent Fuel Storage			
International spent fuel storage.....	3,000,000	4,200,000	3,000,000
Domestic spent fuel storage.....	8,000,000	14,800,000	8,000,000
Program direction.....	482,000	513,000	513,000
Total Interim Spent Fuel Storage.....	11,482,000	19,513,000	11,513,000

may well proceed with a larger size plant unless Federal subsidies to competing projects threaten the economic viability of their projects. Accordingly, the committee believes that the Department should concentrate on its present test and evaluation program, providing support to, rather than competition with, private initiatives.

Solar international.—Solar international is a new program line item to include technology development programs with other countries. The committee believes that in line with the desire for overall fiscal constraint, this program should be moderated for fiscal year 1981 and new major initiatives deferred for consideration in future appropriations.

Solar development and demonstration projects.—Within the funds provided, the committee expects the Department's continued support of the cost effective demonstrations funded in previous appropriations to extend the benefits from these projects for the overall development and use of solar energy in practical applications.

GEOTHERMAL

The committee believes that with the recently enacted tax incentives, the geothermal loan guarantee program, the demonstration program, and the maturing of hydrothermal technology, the Federal role in hydrothermal commercialization and resource development can be reduced appreciably. The committee also believes that an adequate technology development program can be carried out at fiscal year 1980 funding levels. The recommendation continues geopressured resource development at the fiscal year 1980 level.

HYDROPOWER

The committee recommendation continues small-scale hydroelectric development but at a lower level than requested considering the fact that most small-scale hydro installations will use existing technology, as well as the funding available under the demonstration, feasibility study and construction loan programs.

NUCLEAR FISSION

The budget request for nuclear fission presented the committee with a difficult issue. The President recently stated:

The recent events in Iran have shown us the clear, stark danger that excessive dependence on imported oil holds for our Nation. We must make every effort to lead this country to energy security. Every domestic energy source including nuclear power is critical if we are to be free as a country from our present over-dependence on unstable and uncertain sources of high-priced foreign oil. We do not have the luxury of abandoning nuclear power or imposing a lengthy moratorium on its further use.

Nevertheless, the budget request if approved, would:

—Terminate all funding for thermal reactor fuel cycle research which is a critical step to the recovery of valuable unburned nuclear reactor fuel and is an essential element in the solution to final disposal of nuclear wastes.

—Terminate funding for both the gas-cooled high temperature and gas-cooled breeder reactor projects which offer significant potential

Department of Energy

	FT 1980 Estimate	FT 1981 Budget Request	Committee Bill
SUMMARY			
Energy Supply Research and Development			
Solar Applications.....	129,591,000	156,286,000	129,286,000
Solar Technology.....	431,088,000	436,900,000	415,800,000
Geothermal.....	149,362,000	133,400,000	132,400,000
Hydropower Projects.....	23,644,000	49,000,000	17,000,000
Nuclear Fission			
Converter Reactors.....	83,298,000	52,985,000	105,465,000
Commercial Waste Management.....	180,415,000	245,337,000	199,477,000
Spent Fuel Storage.....	18,482,000	20,513,000	12,513,000
Breeder Reactors.....	729,319,000	383,200,000	442,500,000
Total Nuclear Fission.....	1,011,514,000	702,015,000	759,955,000
Space Nuclear Systems.....	39,106,000	41,981,000	41,981,000
Magnetic Fusion.....	353,405,000	396,117,000	373,317,000
Inertial Confinement Fusion - Civilian Applications...	—	—	5,000,000
Electric Energy Systems.....	37,340,000	39,923,000	39,923,000
Energy Storage Systems.....	66,302,000	71,800,000	71,800,000
Environment.....	234,813,000	238,794,000	238,794,000
Basic Research.....	244,524,000	341,185,000	245,385,000
Remedial Action Programs.....	32,645,000	43,550,000	43,550,000
Total Energy Supply R&D.....	2,753,334,000	2,660,951,000	2,514,191,000
Unobligated Balances/FT 1980 deferrals.....	-112,800,000	—	-2,500,000
Total Energy Supply, Research and Development...	2,640,534,000	2,660,951,000	2,511,691,000
Uranium Supply & Enrichment Activities			
Uranium Resource Assessment.....	59,523,000	28,755,000	28,755,000
Advanced Isotope Separation Technology.....	55,718,000	83,944,000	79,244,000
Uranium Enrichment.....	1,110,500,000	1,143,385,000	1,309,807,000
Less Uranium Enrichment Revenues.....	-1,115,000,000	-1,227,530,000	-1,234,045,000
Unobligated Balances/FT 1980 deferrals.....	-50,000,000	—	50,000,000
Proposed FT 1980 deferrals.....	185,000,000	—	-185,000,000
Total Uranium Supply & Enrichment Activities.....	245,741,000	28,755,000	28,755,000
Reclassification of Revenues.....	—	-61,515,000	—
General Science and Research			
Basic Sciences			
Life Sciences Research.....	42,237,000	48,550,000	43,400,000
High Energy Physics.....	317,089,000	354,645,000	326,745,000
Nuclear Physics.....	107,574,000	111,500,000	97,970,000
Total General Science and Research.....	466,900,000	514,695,000	468,115,000

ENERGY SECURITY ACT

JUNE 19, 1980.—Ordered to be printed

Mr. MOORHEAD of Pennsylvania, from the committee of the conference, submitted the following

CONFERENCE REPORT

[To accompany S. 932]

The committee of conference on the disagreeing votes of the two Houses on the amendments of the Senate to the amendments of the House to the bill (S. 932) to extend the Defense Production Act of 1950, as amended, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the House recede from its disagreement to the amendment of the Senate 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 Senate amendment insert the following:

That this Act may be cited as the "Energy Security Act".

TITLE I—SYNTHETIC FUEL

TABLE OF CONTENTS

Sec. 100. Findings and purpose.

Part A—Development of Synthetic Fuel Under the Defense Production Act of 1950

Sec. 101. Short title.

Sec. 102. Declaration of policy.

Sec. 103. Restriction on rationing.

Sec. 104. Expansion of productive capacity and supply.

Sec. 105. General provisions.

Sec. 106. Reports.

Sec. 107. Effective date.

USE OF FACTORS AND DATA

SEC. 596. Factors and data consented to pursuant to section 595 may be revised and agreed to by a consensus of the heads of the various Federal agencies involved. Such factors and data shall be used by all Federal agencies in establishing and revising various energy conservation standards used by such agencies, except that other factors and data may be used with respect to the standards applicable to any program if—

- (1) the other factors and data are approved by the Secretary of Energy solely on the basis that such other factors and data are critical to meet the unique needs of the program concerned;*
- (2) using the consented to factors and data would cause a violation of an express provision of law; or*
- (3) statutory requirements or responsibilities require a modification of the consented to factors and data.*

REPORT

SEC. 597. The President shall report to the Congress on January 1, 1981, and annually thereafter, with respect to—

- (1) the activities which have been carried out under this subtitle; and*
- (2) other efforts which are being carried out to coordinate the various Federal energy conservation programs.*

TITLE VI—GEOTHERMAL ENERGY

SHORT TITLE

SEC. 601. This title may be cited as the "Geothermal Energy Act of 1980".

FINDINGS

SEC. 602. The Congress finds that—

- (1) domestic geothermal reserves can be developed into regionally significant energy sources promoting the economic health and national security of the Nation;*
- (2) there are institutional and economic barriers to the commercialization of geothermal technology; and*
- (3) Federal agencies should consider the use of geothermal energy in the Government's buildings.*

SUBTITLE A

LOANS FOR GEOTHERMAL RESERVOIR CONFIRMATION

SEC. 611. (a) The Secretary of Energy (hereafter in this title referred to as the "Secretary") is authorized to make a loan to any person, from funds appropriated (pursuant to this subtitle) to the Geothermal Resources Development Fund established under section 204 of the Geothermal Energy Research, Development, and Demonstration Act of 1974 (30 U.S.C. 1144), to assist such person in undertaking and carrying out a project which (1) is designed to explore for or determine the economic viability of a geothermal reservoir

and (2) consists of surface exploration and the drilling of one or more exploratory wells.

(b) Subject to subsection (c) and to section 613(b), any loan under subsection (a) shall be repayable out of revenue from production of the geothermal energy reservoir with respect to which the loan was made, at a rate, in any year, not to exceed 20 per centum of the gross revenue from the reservoir in that year; except that if any disposition of the geothermal rights to the reservoir is made to one or more other persons by the borrower, the full amount of the loan balance outstanding, or so much of the loan balance outstanding as is equal to the full amount of the compensation realized by the borrower upon such disposition, whichever is less, shall be repaid immediately. In any case where the reservoir is confirmed (as determined by the Secretary), the Secretary may impute a reasonable revenue for purposes of determining repayment if—

(1) reasonable efforts are not made to put such reservoir in commercial operation,

(2) the borrower (or any such other person) utilizes the resources of the reservoir without a sale of the energy or geothermal energy resources therefrom, or

(3) a sale of energy or geothermal energy resources from the reservoir is made for an unreasonably low price;

except that no such imputation of revenue shall be made during the three-year period immediately following such reservoir confirmation. In the event of failure to begin production of revenue (or, where no sale of energy or geothermal energy resources is made, to begin production of energy for commercial use) within five years after the date of such reservoir confirmation, the Secretary may take action to recover the value, not to exceed the amount of the unpaid balance of the loan plus any accrued interest thereon, of any assets of the project in question, including resource rights.

(c) The Secretary may at any time cancel the unpaid balance and any accrued interest on any loan made under this section if he determines, on the basis of evidence presented by the loan recipient or otherwise, that the geothermal energy reservoir with respect to which the loan was made has characteristics which make that reservoir economically or technically unacceptable for commercial development.

(d) As used in this subtitle, the term "person" includes municipalities, electric cooperatives, industrial development agencies, nonprofit organizations, and Indian tribes, as well as the entities included within such term under 1 U.S.C. § 1.

LOAN SIZE LIMITATION

SEC. 612. The amount of any loan made under section 611(a) with respect to a project described in that section shall not exceed 50 per cent of the cost of such project; except that if the loan is made to a person proposing to make application of the resources of the reservoir involved primarily for space heating or cooling or process heat for one or more structures or facilities then existing or under construction, the loan may be in any amount up to 90 per centum of such cost. In any event no loan shall be made in an amount in excess of \$3,000,000.

LOAN RATE AND REPAYMENT

SEC. 613. (a) Each loan made under section 611 shall bear interest at a discount or interest rate equal to the rate in effect (at the time the loan is made) for water resources planning projects under section 80 of the Water Resources Development Act of 1974 (42 U.S.C. 1962(d)-17(a)).

(b) Each such loan shall be for a term which the Secretary deems appropriate, except that no loan term shall exceed twenty years beyond the date on which production of energy or geothermal energy resources begins from the reservoir involved. If revenues are inadequate (as determined by the Secretary) to fully repay the principal and accrued interest within twenty years after production begins, any remaining unpaid amounts shall be forgiven.

PROGRAM TERMINATION

SEC. 614. No new loans shall be made under this subtitle after September 30, 1986. Amounts repaid on or before September 30, 1986, on loans theretofore made under section 611 shall be deposited in the Geothermal Resources Development Fund for purposes of this subtitle. Amounts repaid after that date on loans theretofore made under section 611, and amounts deposited in the Fund for purposes of this subtitle which remain in the Fund after that date and are not required to secure outstanding obligations under this subtitle, shall be deposited into the United States Treasury as miscellaneous receipts.

REGULATIONS

SEC. 615. The Secretary shall promulgate regulations to carry out this subtitle no later than six months after the date of the enactment of this Act.

AUTHORIZATIONS

SEC. 616. There are hereby authorized to be appropriated for loans under this subtitle not to exceed \$5,000,000 for fiscal year 1981, and not to exceed \$20,000,000 for each of the four succeeding fiscal years. Amounts so appropriated shall be deposited in the Geothermal Resources Development Fund for purposes of this subtitle, and shall remain available for such purposes until expended.

SUBTITLE B**RESERVOIR INSURANCE PROGRAM STUDY**

SEC. 621. The Secretary shall conduct a detailed study of the need for and feasibility of establishing a reservoir insurance and reinsurance program incorporating the terms, conditions, and provisions set forth in section 622, and shall submit to the Congress within one year after the date of the enactment of this Act a report on the results of such study including his findings and recommendations with respect thereto.

ESTABLISHMENT OF PROGRAM

SEC. 622. (a) *If the report of the Secretary submitted pursuant to section 621 affirmatively recommends the establishment of the program and the Congress by law (after review of such recommendation) specifically authorizes the establishment of the program, the Secretary shall establish and implement within six months after the date of the enactment of such authorization a program, in cooperation with the insurance and reinsurance industry, to provide reservoir insurance to qualified eligible applicants in accordance with this section.*

(b) *For the purpose of this section—*

(1) *the term "investment" means the expenditure of, and any irrevocable legal obligation to expend, funds (together with the reasonable interest costs thereof) for the purchase or construction of machinery, equipment, and facilities manufactured, or for services contracted to be furnished, for the development and utilization of a geothermal resource in the United States to provide energy in the form of heat for direct use or for generation of electricity;*

(2) *the term "geothermal resource" means a resource in the United States including (A) all products of geothermal processes embracing indigenous steam, hot water, and hot brines; (B) steam and other gases, hot water and hot brines resulting from water, gas, or other fluids artificially introduced into geothermal formations; (C) heat or other associated energy found in geothermal formations; and (D) any byproducts derived from them, where "byproduct" means any mineral or minerals (exclusive of oil, hydrocarbon gas, and helium) which are found in solution or in association with other geothermal resources and which have a value of less than 75 per centum of the value of the geothermal steam or are not, because of quantity, quality, or technical difficulties in extraction and production, of sufficient value to warrant extraction and production by themselves;*

(3) *the term "risk" means the hazard that a reservoir of geothermal resources will cease to provide sufficient quantities of geothermal resources at minimum conditions required to maintain an economically or technically viable operation for utilization of the geothermal resource;*

(4) *the term "reasonable premiums" means premium amounts determined by the Secretary to be reasonable in light of the amount of investment subject to the risk and premiums charged in similar or analogous situations by private insurers where private insurance is concerned and by insurers or guarantors, both public and private, where public insurance is concerned;*

(5) *the term "other insurance" means any combination of private or public insurance other than investment insurance provided by the Secretary under this section;*

(6) *the term "reservoir" means the physical subsurface geologic structure which forms the natural repository for the undisturbed geothermal resource; and*

(7) *the term "person" means any public or private agency, institution, association, partnership, corporation, political subdivision, or other legal entity which is a United States citizen as determined by application of the test for United States citizen-*

ship contained in section 2(a)-(c) of the Shipping Act, 1916 (46 U.S.C. 802), or in the first sentence of section 27A of the Merchant Marine Act, 1920 (46 U.S.C. 883-1(a)-(e)).

(c) Any person with a total direct investment of not less than \$1,000,000 in the development and use, not including exploration and testing, of a geothermal resource associated with a reservoir, and unable to obtain other insurance at reasonable premiums for the amount of the investment subject to risk, as determined by the Secretary under this section, shall be eligible for investment insurance.

(d) Any eligible person seeking investment insurance under this section shall file an application with the Secretary setting forth (1) the total amount of the contemplated investment in a geothermal resource and associated reservoir; (2) the views of the applicant concerning the nature and extent of the risk, including a geologic, engineering, and financial assessment based on site specific results of exploration and testing of the geothermal resource and the reservoir, stated with as much specificity as is possible; (3) the status of all required Federal, State, and local approvals, permits, and leases for the proposed development and utilization operations at the site; (4) the extent to which the applicant has been able to obtain other insurance against the risk; and (5) such other information as the Secretary may require.

(e) Unless the Secretary determines the risk proposed by the applicant is unreasonable, the Secretary, within ninety days after receipt of a satisfactory application, shall determine in writing and submit to the applicant (1) the risk which may cause loss of investment for the applicant; (2) the total investment subject to the risk; (3) the amount of the other insurance which is available at reasonable premiums for the purpose of indemnifying the applicant against the risk; (4) the amount of investment insurance available pursuant to this section, which shall be the difference between the total investment subject to the risk and the total other insurance determined to be available at reasonable premiums, but not in excess of the lesser of 90 per centum of, or \$50,000,000 of, the loss of investment subject to the risk; and (5) any reasonable terms and conditions necessary for the prudent administration of the program, including reasonable premiums for the insurance pursuant to this section (which shall be deposited in the Geothermal Resources Development Fund).

(f) The Secretary, within ninety days after making and submitting the determinations under subsection (e), and upon agreement of the applicant to such determinations, shall issue a certificate of insurance containing such terms and conditions as the Secretary shall specify, which shall not be transferrable without the express approval of the Secretary for good cause shown, and shall execute a contract with the applicant setting forth the terms and conditions of the investment insurance and such other provisions as may be necessary to protect the interests of the United States, including provisions with respect to the ownership, use, and disposition of any currency, credits, assets, or investments on account of which payment under such insurance is to be made and any right, title, claim, or course of action existing in relation thereto.

(g) Any holder of a certificate of insurance pursuant to subsection (f) who claims a loss of value of his investment by reason of the specified risk shall receive compensation, to the extent the Secretary

determines that the holder is eligible to receive compensation pursuant to the certificate and the contract, in the amount of the loss incurred by the holder which is subject to insurance and for which the holder has not received and will not receive compensation from other insurance.

(h) Any compensation received by the holder shall be withdrawn from the Geothermal Resources Development Fund. The full faith and credit of the United States is hereby pledged to the payment of any compensation under this section.

(i) A person shall not be denied insurance pursuant to this section solely because such person is the recipient of other Federal assistance under this or any other Act.

(j) There may be appropriated to the Geothermal Resources Development Fund (established pursuant to section 204 of the Geothermal Energy Research, Development and Demonstration Act of 1974 (30 U.S.C. 1144)), for purposes of this section, such amounts as are authorized for such purposes in the law referred to in subsection (a) or in other legislation hereafter enacted.

(k) The Secretary may enter into agreements to reinsure any private insurer for any risk associated with insurance for the development and utilization of a geothermal resource and associated reservoir, using the procedures set forth in subsections (c) through (i), to the extent that he deems it appropriate in order to provide an incentive for the participation of the private insurance industry in geothermal development; and he may also use any other available authority to obtain such participation. The Secretary shall submit a report to the Congress, within one year after the enactment of the law referred to in subsection (a), on the need for any additional authority to obtain such participation.

SUBTITLE C

FEASIBILITY STUDY LOAN PROGRAM

SEC. 631. (a) The Secretary is authorized and directed to establish a program of assistance for the accelerated development of geothermal resources for nonelectric applications by geothermal utility districts, geothermal industrial development districts, and other persons.

(b)(1) In providing assistance under the program established pursuant to subsection (a), the Secretary is authorized to make a loan to any person to defray up to 90 per centum of the costs of (A) studies to determine the feasibility of any geothermal development described in such subsection, and (B) preparing applications for any necessary licenses or other Federal, State, and local approvals respecting such development.

(2) The Secretary may cancel the unpaid balance and any accrued interest on any loan granted for a study pursuant to clause (A) of paragraph (1) if he determines, on the basis of the study, that the geothermal development is not technically or economically feasible.

(c) In providing assistance under such program, the Secretary is also authorized to make a loan to any person to defray up to 75 per centum of the costs directly related to the construction of a system or systems for nonelectric geothermal development pursuant to such subsection, where the Secretary finds that—

(1) all necessary licenses and other required Federal, State, and local approvals for construction of such system or systems have been or will be issued,

(2) the project involved will comply with all applicable laws relating to protection of the environment, and

(3) the applicant requires such assistance to undertake and complete the project.

(d) Each loan made pursuant to this section shall bear interest at a discount or interest rate equal to the rate in effect (at the time the loan is made) for water resources planning projects under section 80 of the Water Resources Development Act of 1974 (42 U.S.C. 1962(d)-17(a)). Each loan shall be for such term as the Secretary deems appropriate, but not in excess of ten years for loans under subsection (b) or thirty years for loans under subsection (c).

(e) Loans pursuant to this section shall be made from funds appropriated (pursuant to this subtitle) to the Geothermal Resources Development Fund established under section 204 of the Geothermal Energy Research, Development, and Demonstration Act of 1974 (30 U.S.C. 1144); and amounts repaid on such loans shall be deposited in the Geothermal Resources Development Fund for purposes of this subtitle.

(f) For loans under clause (A) of subsection (b)(1) for fiscal year 1981, there is authorized to be appropriated to the Geothermal Resources Development Fund not to exceed \$5,000,000, which shall remain available until expended. For loans under such clause (A) for subsequent fiscal years, and for loans under clause (B) of subsection (b)(1) or under subsection (c) (for any such subsequent fiscal year), there may be appropriated to such Fund only such sums as are authorized by legislation hereafter enacted.

(g) As used in this section, the term "person" includes municipalities, cooperatives, industrial development agencies, nonprofit organizations, and Indian tribes, as well as the districts referred to in subsection (a) and the other entities included within such term under 1 U.S.C. § 1.

**SUBTITLE D—AMENDMENTS TO GEOTHERMAL RESEARCH,
DEVELOPMENT, AND DEMONSTRATION ACT**

SEC. 641. Title II of the Geothermal Research, Development, and Demonstration Act of 1974 (30 U.S.C. 1101 et seq.) is amended—

(1) by striking out the period at the end of the first sentence in section 201(c) and inserting in lieu thereof the following: "except that any guarantee made for a loan to an electric, housing, or other cooperative, or to a municipality (as defined in section 3(7), part 1, of the Federal Power Act), may apply to so much of the principal amount of the loan as does not exceed 90 percent of the aggregate cost of the project. In determining the aggregate cost of a project for purposes of the preceding sentence, there shall be excluded the cost of constructing electrical transmission lines to the extent that the cost of constructing such lines exceeds 25 percent of the aggregate cost of the project (as determined without regard to this sentence); except that the Secretary may waive or limit the application of this sentence with respect to any project located in the State of Hawaii upon a finding that such project is remote from the area of primary

consumption, that a transmission line is required before the geothermal reservoir can be developed, and that the particular transmission line involved will be used for more than the plant which is the subject of the loan guarantee.”;

(2) by striking out “the ten-calendar-year period following the date of enactment of this Act” in section 203 and inserting in lieu thereof “fiscal year 1990”; and

(3) by adding at the end thereof the following new sections:

“APPROVAL OR DISAPPROVAL OF LOAN GUARANTEE APPLICATIONS

“SEC. 206. The Secretary, within sixty days after the enactment of this section, shall establish and implement procedures providing for a final decision on any loan guarantee application within four months of the date of filing. To the maximum extent practical, an applicant should be advised (prior to the submission of the application) of all information which will be required of the applicant in processing the application; and the date of filing shall be considered to be the date when all of such information has been submitted by the applicant. Any application proposed and filed as of the date of the enactment of this section shall be subject to final decision within not more than four months after such date.

“APPLICATION OF NATIONAL ENVIRONMENTAL POLICY ACT

“SEC. 207. The Secretary shall ensure, to the maximum extent possible, that any action undertaken pursuant to section 102(2)(C) of the National Environmental Policy Act of 1969 which is associated with the granting of a loan guarantee under this title takes the maximum cognizance allowable under law of any other action theretofore undertaken pursuant to such section 102(2)(C) with respect to the project which is the subject of such loan guarantee, and that no such action associated with the loan guarantee shall duplicate any action theretofore undertaken under such section 102(2)(C) in connection with such project, so long as all of the requirements which are applicable to such project under such section 102(2)(C) will have been satisfied.”

USE OF GEOTHERMAL ENERGY IN FEDERAL FACILITIES

SEC. 642. The option of using geothermal energy or geothermal energy resources shall be considered fully in any new Federal building, facility, or installation which is located in a geothermal resource area as designated by the Secretary.

AMENDMENTS TO FEDERAL POWER ACT AND PUBLIC UTILITY REGULATORY POLICIES ACT

SEC. 643. (a) The Federal Power Act is amended—

(1) by inserting “geothermal resources,” after “renewable resources,” in section 3(17)(A)(i);

(2) by inserting “geothermal power producer (including a producer which is not an electric utility),” after “Federal power marketing agency,” in section 210(a)(1); and

(3) by striking out “Any electric utility” at the beginning of section 211(a) and inserting in lieu thereof “Any electric utility.

geothermal power producer (including a producer which is not an electric utility)."

(b) Section 210 of the Public Utility Regulatory Policies Act of 1978 (Public Law 95-617) is amended—

(1) by inserting ", and to encourage geothermal small power production facilities of not more than 80 megawatts capacity," after "to encourage cogeneration and small power production" in the first sentence of subsection (a);

(2) by striking out "qualifying cogeneration facilities" in subsection (e)(1) and inserting in lieu thereof "geothermal small power production facilities of not more than 80 megawatts capacity, qualifying cogeneration facilities,"; and

(3) by inserting ", or 80 megawatts for a qualifying small power production facility using geothermal energy as the primary energy source," after "30 megawatts" in subsection (e)(2).

REGULATIONS

SEC. 644. All regulations made with respect to this subtitle shall be promulgated no later than six months after the date of the enactment of this Act.

TITLE VII—ACID PRECIPITATION PROGRAM AND CARBON DIOXIDE STUDY

SUBTITLE A—ACID PRECIPITATION

SHORT TITLE

SEC. 701. This title may be cited as the "Acid Precipitation Act of 1980".

STATEMENT OF FINDINGS AND PURPOSE

SEC. 702. (a) The Congress finds and declares that acid precipitation resulting from other than natural sources—

(1) could contribute to the increasing pollution of natural and man-made water systems;

(2) could adversely affect agricultural and forest crops;

(3) could adversely affect fish and wildlife and natural ecosystems generally;

(4) could contribute to corrosion of metals, wood, paint, and masonry used in construction and ornamentation of buildings and public monuments;

(5) could adversely affect public health and welfare; and

(6) could affect areas distant from sources and thus involve issues of national and international policy.

(b) The Congress declares that it is the purpose of this subtitle—

(1) to identify the causes and sources of acid precipitation;

(2) to evaluate the environmental, social, and economic effects of acid precipitation; and

(3) based on the results of the research program established by this subtitle and to the extent consistent with existing law, to take action to the extent necessary and practicable (A) to limit or eliminate the identified emissions which are sources of acid

TITLE VI

SUBTITLE A—LOANS FOR GEOTHERMAL RESERVOIR CONFIRMATION

Section 602. This section provides for certain findings by the Congress.

Section 611. This subtitle establishes a new loan program to assist the geothermal industry in exploring for and confirming the economic viability of geothermal reservoirs. A project is considered to be one which is designed to explore for or confirm the economic viability of a geothermal reservoir, including surface exploration and any other tests or procedures, up to and including the drilling of one or more exploratory wells.

The Secretary is authorized to make loans from funds authorized to be appropriated to the Geothermal Resources Development fund, pursuant to this title. Loans are to be paid back at a rate of not more than 20 percent of annual gross revenue from the sale of either electrical energy or direct energy from geothermal resources, from the confirmed reservoir. If the reservoir is confirmed but not used commercially, a revenue may be imputed by the Secretary. The Secretary of Energy will determine when a reservoir is confirmed, based upon criteria utilized by industry, and pursuant to information provided to him by the borrower, or otherwise.

The Secretary may cancel the unpaid balance on any loan if the geothermal reservoir is determined to be technically or economically unacceptable for commercial development. "Person" is defined to include all entities in the statutory definition in 1 U.S.C. 1, and specifically includes municipalities, electric cooperatives, industrial development agencies, nonprofit organizations, and Indian tribes.

Section 612. No loan may exceed 50 percent of the costs of such project, except that for a project primarily for space heating or cooling or process heat, the loan may be up to 90 percent of the project costs. In no event shall a loan exceed \$3 million for a project.

Section 613. Loans are made at the same rate as water resources planning projects, for a period of 20 years. If revenues are inadequate to fully repay the principal and accrued interest within 20 years after production begins, any remaining unpaid amounts shall be forgiven.

Section 614. No new loans shall be made after the end of fiscal year 1986. All funds received pursuant to loans made under Section 611 after this fiscal year shall be deposited as miscellaneous receipts in the United States Treasury.

Section 615. The Secretary shall promulgate all regulations made with respect to this subtitle within six months after the date of enactment.

Section 616. For fiscal year 1981, \$5 million is authorized to be appropriated to the Geothermal Resources Development Fund for

the purposes of this subtitle; \$20 million is authorized to be appropriated for each of the four succeeding fiscal years.

SUBTITLE B—RESERVOIR INSURANCE PROGRAM STUDY

Section 621. Within one year after the date of enactment the Secretary is to transmit his report to the Congress on the results of a detailed study of the need for and the feasibility of a Federal program establishing a geothermal reservoir insurance and reinsurance program. The Secretary shall consider, among other things, the role of the reinsurance industry in such report.

Section 622. Upon review of the report, and if the report affirmatively recommends the establishment of the program, the Congress by subsequent act, may specifically authorize this program to be established.

The report shall specifically focus on the language included in this section which sets forth such a program of insurance and reinsurance for geothermal reservoirs but will not be limited to such language. Such a program would provide insurance and reinsurance against the risks associated with the geothermal reservoir failure or partial failure after significant investment in development and use (at least \$1 million) has occurred at a geothermal energy project dependent upon the reservoir. The DOE reservoir insurance program would provide direct insurance only as necessary to supplement any existing private or public insurance available from commercial insurers or other public insurance programs, up to a maximum total insurance from private, public, and DOE sources of \$50 million or 90 percent of the investment, whichever is less. The program would also include DOE reinsurance of any direct reservoir insurance provided by a private insurer, and would include other efforts under other authority to obtain greater participation of the private insurance industry in the area of reservoir insurance by providing an appropriate reserve for the contingent obligations associated with direct insurance and reinsurance commitments resulting from the program. The subsequent legislation required by this Act will provide authorization for such sums as are necessary to be appropriated to the Geothermal Resources Development Fund for use, pursuant to this section. Also, any revenue from premiums paid on DOE insurance or reinsurance would be deposited in the fund in the account established for this purpose.

SUBTITLE C—FEASIBILITY STUDY LOAN PROGRAM

Section 631. There is established in the Department of Energy a new loan program for 90 percent of the cost of feasibility studies and regulatory applications, and 75 percent of costs of construction programs for the development of a proposed nonelectric geothermal system which are shown to be feasible. The loans for feasibility studies may be cancelled if the development of the proposed system is not technically or economically feasible. All loans under the program will bear the interest rate specified for water resources planning projects. A designated subaccount in the Geothermal Resources Development Fund will be the source of all funds for the loan program, and \$5 million is authorized to be appropriated to this sub-

account for the purpose of feasibility study loans. Loans for preparing regulatory applications and for construction purposes will be authorized for appropriations in subsequent legislation. The definition of "person", as used in this section contains all entities listed in 1, U.S.C. 1, and is expanded to include municipalities, cooperatives, industrial development agencies, nonprofit organizations, and Indian tribes, as well as the districts referred to in subsection A of this section.

**SUBTITLE D—AMENDMENTS TO THE GEOTHERMAL ENERGY
RESEARCH, DEVELOPMENT, AND DEMONSTRATION ACT**

Section 641. This section contains several amendments to the organic loan guarantee legislation, contained in Title II of the Geothermal Energy Research, Development and Demonstration Act of 1974, (30 U.S.C. 101. *et seq.*). This Act is amended by raising the maximum loan guarantee limit from 75 percent to 90 percent of the costs of any project if the guarantee is made for a loan to an electric, housing or other cooperative, or a municipality.

This act is also amended to exclude all costs of constructing electrical transmission lines which exceed 25 percent of the aggregate cost of the project. In determining this percentage, the amount used in the denominator shall be the total aggregate cost of the project, including the total cost of constructing the electric transmission lines.

An exception to the limitation on funding electric transmission lines is provided in the case of the State of Hawaii, if the Secretary finds that a transmission line is required before the geothermal reservoir can be developed and the project will be remote from the area of primary consumption. On-site consumption is not to be considered for the purpose of this determination. In addition, the transmission line must be capable of being utilized for more than the plant which is the subject of the loan guarantee.

It is the Conferees' intent that only the transmission lines and related equipment necessary for support, maintenance, and interconnect would be eligible for financial assistance as part of the total project cost.

The loan guarantee program has been extended until the end of fiscal year 1990.

A new section, Section 206, is added to the loan guarantee provisions to require the Secretary of Energy to institute a series of procedural reforms to implement more orderly and expeditious processing of geothermal loan guarantees. This new procedure will include a deadline of four months for processing and reaching a final decision on a loan application.

A new section, Section 207, is added to the geothermal loan guarantee provisions to require the Secretary to take the maximum cognizance allowable of any other action previously undertaken pursuant to the National Environmental Policy Act, Section 102(2)(C). This requirement is designed to prevent any significant duplication in the Secretary's considerations pursuant to such section, in connection with the application for a loan guarantee. However, all of the requirements which are applicable to such project under such Section 102(2)(C) must be fully satisfied.

Section 642. The Federal government is required to consider the option of using geothermal energy or geothermal energy resources fully in any new Federal building, facility, or installation which is located in a geothermal resource area which may be designated by the Secretary.

Section 643. This section makes certain amendments to the Federal Power Act and the Public Utility Regulatory Policies Act of 1978.

Subsection (a) contains three amendments to the Federal Power Act. Subsection (a) (1) clarifies the authority of the FERC to classify geothermal resources as a primary energy resource for the purpose of the definition of a "small power production facility" under Section 3(17) (A). The Conferees do not intend to cast the FERC's present regulations under 3(17) of the Federal Power Act into doubt by reason of this amendment.

Subsection (a) (2) and (a) (3) amend the Federal Power Act to provide that any geothermal power producer may apply for interconnection and wheeling orders under Sections 210 and 211(a) of the Federal Power Act, regardless of whether the producer is an electric utility or not.

Subsection (b) contains three amendments to Section 210 of the Public Utility Regulatory Policies Act of 1978. Section 210(a) requires the Commission to prescribe certain rules to encourage cogeneration and small power production. Subsection (b) (1) amends Section 210(a) to expand the scope of these rules to encourage geothermal small power production facilities of not more than 80 megawatt capability.

Subsection (b) (2) amends Section 210(e) to authorize the FERC to exempt geothermal small power production facilities of not more than 80 megawatts capacity from the laws and regulations specified in Section 210(e).

Subsection (b) (3) contains an amendment which removes the limitations on the exercise of the FERC's authority under subsection 210(e) (1), which is contained in subsection (e) (2). In effect, this amendment allows the Commission to exempt from all the laws and regulations specified in Section 210(e) (1) any qualifying small power production facility using geothermal energy as the primary energy source without regard to capacity, as long as it does not exceed 80 megawatts capacity. The Conferees expect that the Commission exercise this authority promptly and in no event later than six months after the date of enactment, because this limitation appears to be a significant disincentive to some geothermal small power production development.

The Conferees intend that any required changes to existing or proposed regulations under these sections of PURPA shall be made by amendments to such regulations and shall not delay the effectiveness of any regulations thereto.

The Conferees intend that the amendments to the Federal Power Act and the Public Utility Regulatory Policies Act contained in Section 643 be implemented by amendment of existing regulations, rather than reissuance of such existing regulations.

All references in Section 643 to megawatt capacity refer to megawatt electric capacity.

General

The Conferees intend that any new authority for granting financial assistance under this Title will not be used for any proposed project in the Island Park Geothermal Area which is within 35 miles of the boundary of Yellowstone National Park, unless there has been enacted into law, legislation which provides for protection of the nationally significant thermal features located in the Park (as contained in H.R. 6080, as passed by the House of Representatives, and S. 1388, as reported by the Senate Committee on Energy and Natural Resources, in the 96th Congress).

The Conferees suggest that the Secretary of Energy should conduct three (3) parallel studies related to the accelerated development of geothermal resources in the United States, including (1) geopressured methane, (2) hot dry rock systems, and (3) environmental control technology. The Conferees recognize that the third study is nearly completed.