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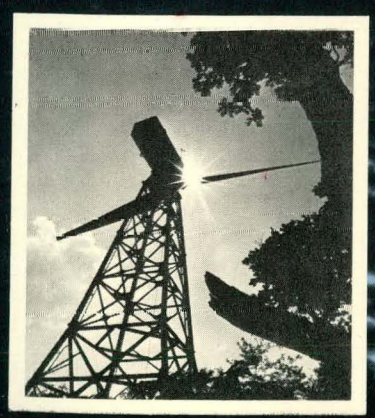


U.S. Department of Energy

Doing Business with the Department of Energy

Procurement and Assistance Management Directorate
December 1980

DISCLAIMER

This Guide is intended solely for general informational purposes and as a convenient reference tool. Specific legal requirements, policies and procedures are contained in applicable laws and published regulations.

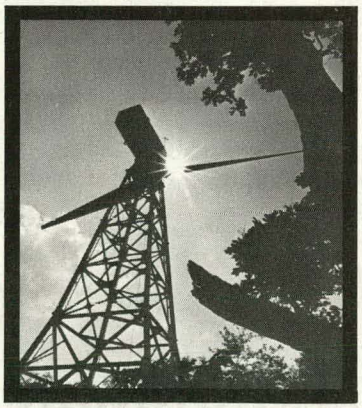
This guide does not generally reflect small purchase procedure, nor use of the General Services Administration (GSA) Schedule.

Additional copies of this Guide may be obtained by writing to:

USDOE — TIC
P.O. Box 62
Oak Ridge, TN 37830

Prepared by
Office of Business Liaison
Procurement and Assistance
Management Directorate

U. S. Department of Energy
Washington, D.C. 20585



U.S. Department of Energy

Doing Business with the Department of Energy

Procurement and Assistance Management Directorate
December 1980

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

Foreword

Thank you for your interest in the Department of Energy (DOE). Since our inception in October, 1977, we have often been asked how a private concern goes about doing business with DOE. This guide is intended to answer that question by providing basic information and initial contacts for possible business opportunities.

Actually, there is nothing particularly unique about dealing with the various components of DOE. Basic principles followed with other federal agencies as well as with the private sector also apply in dealing with DOE.

Two principles that are especially appropriate in establishing and keeping a working relationship with DOE procurement and assistance activities are:

- Learn DOE's needs as well as its awarding policies and practices.
- Follow leads on where buying is done, where assistance is available, and search out opportunities in all segments of the DOE organization.

We encourage wide participation by the private sector in our many fields of energy technology. We especially welcome small business, small disadvantaged business, labor surplus area concerns and women owned business to explore procurement and assistance opportunities with DOE. The Department has set up an Office of Small and Disadvantaged Business Utilization expressly for the purpose of assuring that such firms have a fair opportunity to do business with DOE. Small and small disadvantaged business firms should make that office their initial point of contact.

All other elements of the private sector are encouraged to make the Office of Business Liaison their initial point of contact. We sincerely hope that you will take the time to review this guide and participate with us, to our mutual advantage, in meeting the energy challenge that lies ahead for our nation.

Hilary J. Rauch, Director
Procurement and Assistance
Management Directorate

About This Guide

This guide has been prepared with the aim of presenting this material in a simple straightforward way. In many cases some detail has been sacrificed in the interest of general understanding and clarity. Therefore, it must be noted that this guide is intended solely for general informational purposes and as a convenient marketing tool. Specific legal requirements, policies and procedures are contained in applicable laws and regulations. References are made to these laws and regulations in the guide and a listing of those considered to be of major importance are included in the section entitled "References and Bibliography" at the end of this guide.

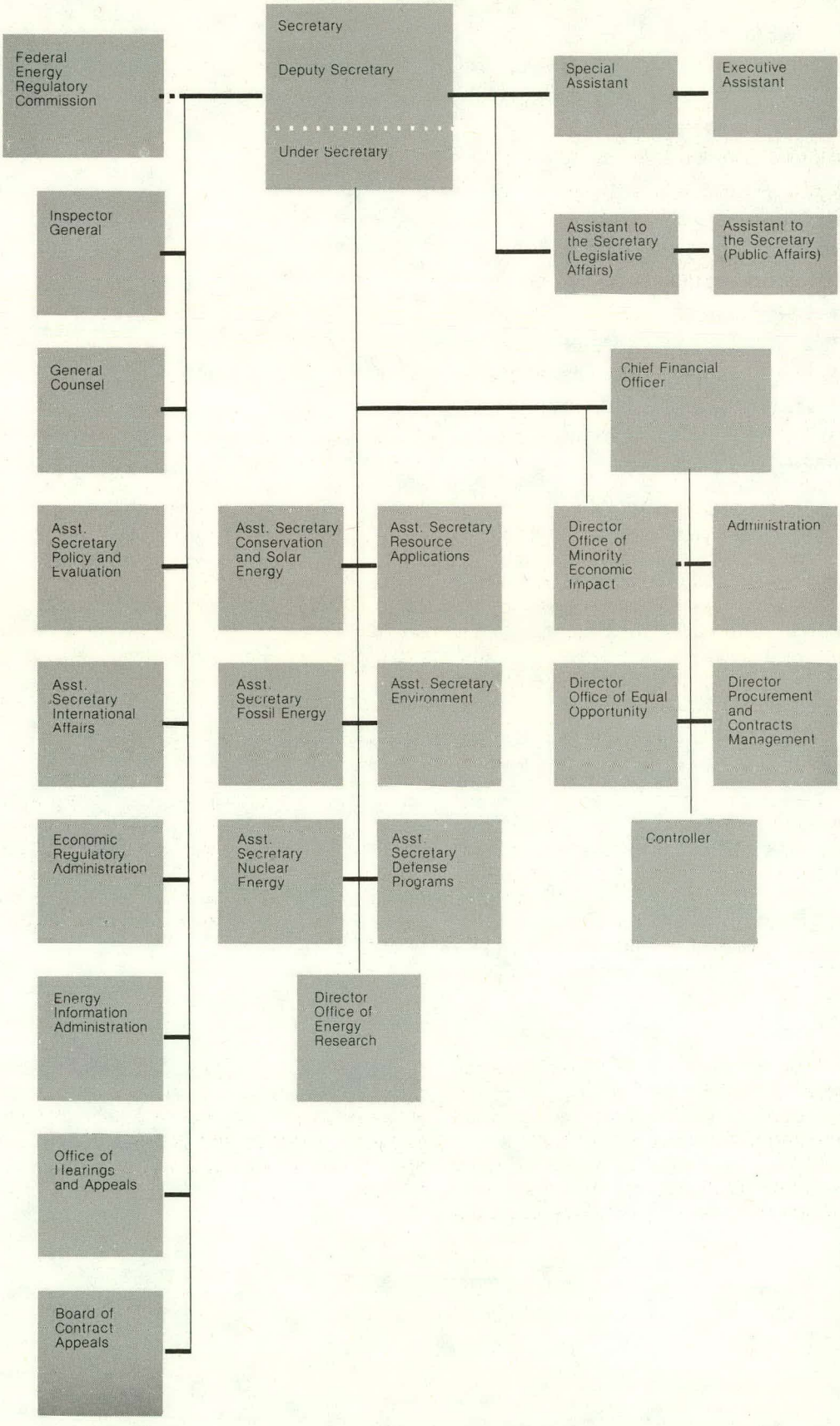
We expect that some readers of this guide will already be familiar with the basics of federal procurement and financial assistance. If this is the case, the basic material covered by Chapters 1 and 2 need only be briefly reviewed.

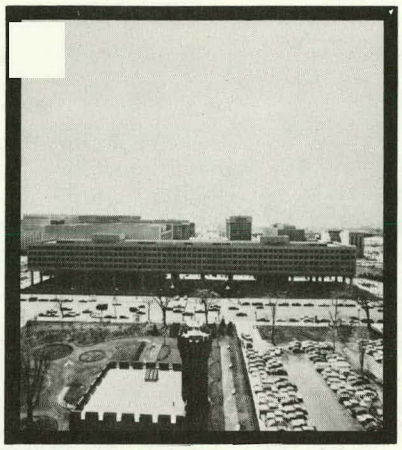
Also included as an insert to this guide is a Directory which is updated at regular intervals. The Directory lists the points of contact and addresses for the various DOE headquarters and field organizations, and major DOE contractors. Telephone numbers for these points of contact may be changed from time to time. *Current telephone numbers for DOE Headquarters contacts may be obtained by dialing the DOE locator (202) 252-5000.*

A twenty-minute color film entitled "*Doing Business with DOE*," is available as a supplement to this guide. The film features specific methods of contracting that are particularly appropriate for small business and small disadvantaged business firms. (See section entitled References and Bibliography, reference 14, for ordering and distribution information.)

Table of Contents

Department of Energy Organization





Chapter I

How to Get Started

Introduction

First steps always seem to be most difficult. We hope that this guide will make the first step in doing business with DOE easier. Doing business with DOE is really no different than doing business in any other prospective market (i.e. getting to know and understand potential requirements). This guide will identify the areas in which DOE has an interest as well as describe in general terms the procurement contracting and financial assistance processes. It provides information concerning the estimated DOE contract and financial assistance dollars in order to illustrate centers of potential business opportunities, and it briefly describes the special considerations (e.g. small business set-asides; 8A procurements) available for certain types of business organizations. Finally, how DOE is organized is described with particular emphasis on organizational components engaged in large procurement/financial assistance activity. Also explained is the importance of the field organizations as centers of business activity.

Role of the Office of Business Liaison

The Office of Business Liaison is a central point of contact with the private sector, particularly with groups representing various segments of the business and academic communities. We are prepared and willing to discuss all matters relating to procurement and financial assistance policies and procedures not identified with a specific solicitation or award instrument issue. These latter issues should be directed to the appropriate contracting officer for resolution. Please consult the Directory (included as a separate insert to this booklet) for the current address and phone number of the Office of Business Liaison.

Role of Office of Small and Disadvantaged Business Utilization

The Office of Small and Disadvantaged Business Utilization (OSDBU) is a central point of contact for Small Business, Small Disadvantaged Business, Labor Surplus and Women Owned Business firms desiring to do business with DOE. OSDBU is prepared to discuss the various procurement preference programs and can assist firms in contacting appropriate DOE technical personnel. Please consult the Directory (included as a separate insert to this booklet) for the current address and phone number of the OSDBU.

The Commerce Business Daily and the Federal Register

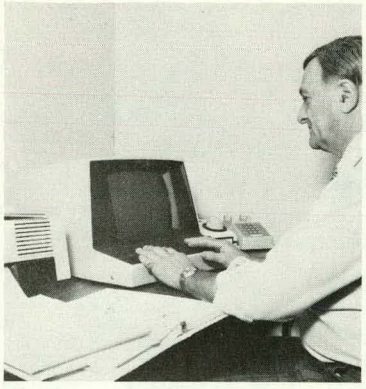
The Commerce Business Daily (CBD) is used to publicize proposed Government procurement actions over $5,000 and all contract awards over $25,000. In addition, many prime contracts which offer subcontracting opportunities are also publicized in the CBD. The CBD and the Federal Register are used for notifications regarding available financial assistance. We strongly encourage all business organizations to utilize both the CBD and the Federal Register as primary sources of information concerning business opportunities at DOE. Please remember, however, to promptly obtain copies of a solicitation since many solicitations will have a closing date that makes speed essential. The CBD and Federal Register are available on a subscription basis from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Ordering Information, including rates, may be obtained by calling (202) 783-3238.

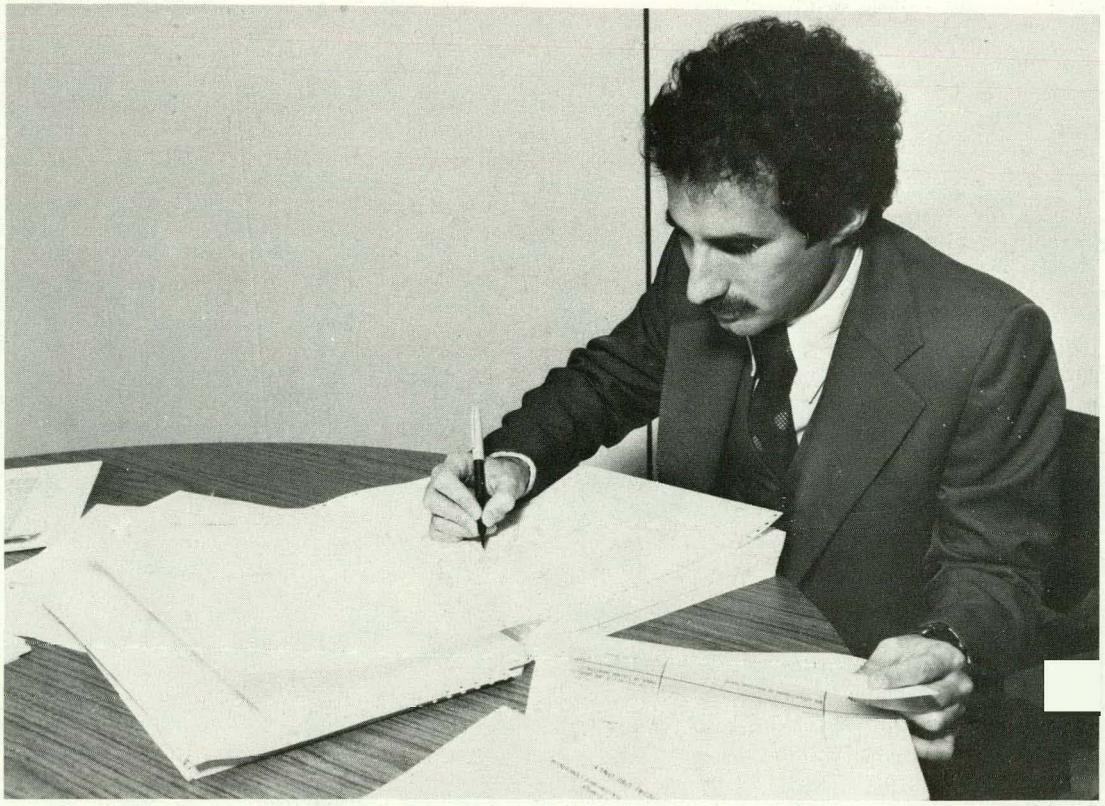
Directory of Potential Sources

The Department of Energy is currently developing a Directory of Potential Sources (DPS) data base. Firms engaged in architect-engineering services, research and development, management services, regulatory studies, environmental research, etc. will be registered in a computerized data base. The required forms are SF-129, Bidders Mailing List application and SF-254 Architect-Engineer and Related Services Questionnaire. Requests for the required forms should be directed to the following address:

Directory of Potential Sources
Procurement Management Systems and Analysis Division
Procurement and Assistanced Management Directorate
U.S. Department of Energy
Washington, D.C. 20585

Please note, however, that inclusion in the Directory of Potential Sources (DPS) does not mean that you will automatically receive copies of solicitations in areas of your interest. This is due to the large size of the data base which may result in only a portion of the list, for a particular subject area, being utilized for any given solicitation.





Procurement Automated Source System (PASS)

The Small Business Administration, with DOE financial support, has established the Procurement Automated Source System (PASS). The purpose of the system is to significantly improve Government contract and subcontract opportunities for small business concerns by matching future procurement requirements against the capabilities of small businesses or small disadvantaged businesses contained in the PASS data base. Registration with PASS is free and entirely voluntary. Applications are available from any of the Regional Small Business Administration Offices or from the DOE Office of Small and Disadvantaged Business Utilization (see Directory insert for current address).

Catalog of Federal Domestic Assistance

The Catalog of Federal Domestic Assistance is a government-wide listing of federal programs, projects, services and activities which provide assistance or benefit to the American public. It contains over 1,000 financial and non-financial assistance programs administered by the Federal Government. It is a valuable reference tool to assist potential applicants in identifying programs for which they may be eligible. It is available on a subscription basis from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. You can obtain ordering information, including rates, by calling (202) 783-3238.

Other Sources of Information

Copies of current competitive solicitations are generally posted and available in each procurement office. Periodic visits to the procurement offices will be helpful, both in understanding how DOE operates, as well as getting to know the people involved with the actual procurement contracting and financial assistance process. In addition there are many publications which will prove to be useful in learning about DOE programs. A list of some of these publications, including ordering information, appears at the end of this guide. These sources should be carefully reviewed for potential leads in terms of business opportunities.

Marketing DOE

There are essentially two methods of marketing DOE, passive and active. Passive marketing includes many of the marketing tools already described such as the CBD, Federal Register, DPS, and for small businesses or small disadvantaged businesses, PASS. In marketing many Federal Agencies, the use of these marketing tools alone would be adequate to ensure probable success. This is especially true when dealing with federal agencies that primarily procure common supplies and ser-

vices. However, experience has shown that successful business organizations marketing the high technology agencies such as DOE, NASA, and components of DOD have gone beyond passive marketing to active marketing. Active marketing involves contracting the appropriate technical personnel in an effort to get to know their needs. This results in a better understanding of problems faced by DOE as it see o develop potential solutions to energy is . This, of course, requires periodic contact with key technical personnel on a "One on One" basis. This aspect of marketing is often overlooked by many business organizations. We wish to emphasize its importance, particularly in the case of DOE.

Role of Contracting Officer

It is essential for anyone doing business with DOE to be aware that only a Contracting Officer can authorize the incurrence of cost in connection with any work performed for DOE. You should assure yourselves that anyone encouraging work to be performed possesses this authority prior to incurrence of any cost. If this is not the case, then it is quite likely that you will not be paid. In addition, any questions or problems concerning a specific procurement or financial assistance issue should be directed to the Contracting Officer for resolution.

Decentralization Policy and Lead Mission Concept

Although there are exceptions, DOE has decided to place project management close to the site of operations whenever possible, especially for construction and pilot plant projects. It is DOE policy to decentralize project management activities outside of Washington, D.C., and to assign management of certain energy projects to an operations office, a regional office, or to a special site/project office. The establishment of lead missions is one important element of this policy. Lead mission assignments within DOE involve the delegation of significant project management and program implementation authority and responsibilities to elements of the field organization. However, overall program management responsibility remains at headquarters. Lead mission assignments are made to ensure effective execution of programs.

The net effect of this policy from a business standpoint is to create a large number of geographically dispersed procurement offices throughout the nation. Significant business opportunities are present at all of these offices

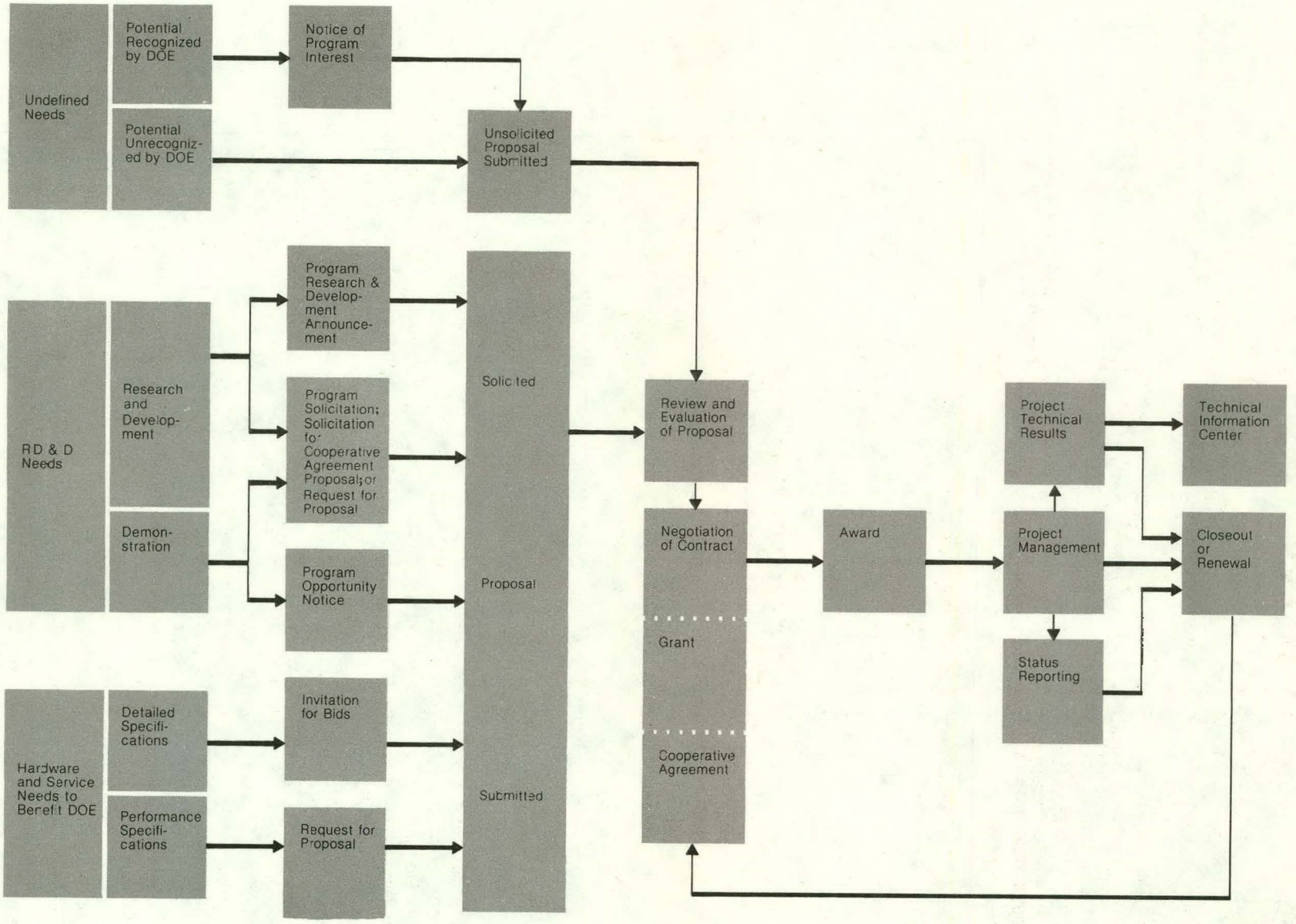
The location of these offices is described in detail in Chapter IX of this guide.

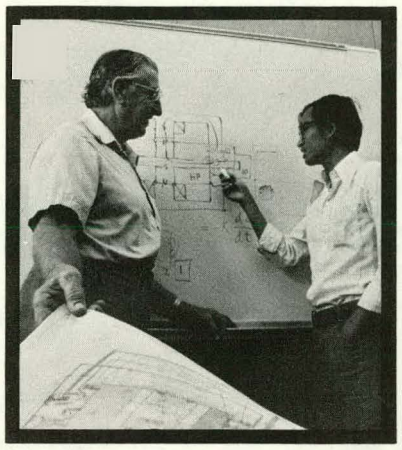
Subcontracting Opportunities with GOCO's

DOE utilizes a number of Government Owned Contractor Operated (GOCO) facilities to carry out its programs. Significant subcontracting opportunities are available at these GOCO's for qualified firms since a large percentage of the procurement budget is directed to them. A listing of these firms is included in the Directory which is an insert to this guide. It is strongly urged that this area of marketing not be overlooked by organizations seeking to do business with DOE.


The
Wind Energy
Pavilion

Proposal and Project Management Process





Chapter II

How We Do Business—An Overview of the Procurement Contract and Financial Assistance Process

Introduction

Understanding the procurement contracting and financial assistance processes is important both in terms of successfully marketing DOE as well as avoiding mistakes which could prove to be costly. The process within the Federal Government is different than that within the business world since it involves the spending of the taxpayers money. In simplest terms the federal process involves not only obtaining the best results at the lowest possible cost, usually through competition, but it also serves to carry out many national security, social, and economic goals established by law. As a result of these requirements a formal process has been created which can, at first glance, seem rigid and frustrating to a businessman.

The chart on the opposite page outlines the proposal and project management process.

ground rules for the procurement contracting process are contained in the Federal Procurement Regulations (FPR)(Reference 18) supplemented by the DOE Procurement Regulations (DOE-PR)(Reference 6). The financial assistance process is chiefly governed by the groundrules set by the Office of Management and Budget Circulars (Reference 5) and the DOE Assistance Regulations (Reference 7 & 8). In addition there are a number of other statutes and executive orders that affect the procurement and financial assistance processes. It is important that business organizations obtain at least a basic understanding of these regulations at an early stage. In most cases the applicable requirements are contained or referenced in the solicitation package itself within what is generally referred to as the "boilerplate" section. Unfortunately, some businessmen may ignore this part of the solicitation package much to their later regret. A few of these requirements will be briefly covered in Chapter VII of this guide entitled *Special Considerations.*

Procurement Contracts vs Financial Assistance

To most business persons the term "contract" is familiar. Less familiar, perhaps, is the term "financial assistance." Nevertheless, financial assistance can be important to the business person and as a result of Public Law 95-224 it is clearly made available to for-profit business concerns. Because it is a less familiar term, and because of its growing importance at DOE, financial assistance is briefly discussed below. Since there are both similarities and significant differences between procurement contracts and financial assistance, these have been noted wherever they occur.

Financial Assistance — An Overview

At present over half the federal budget is devoted to assistance programs. The span of assistance activity ranges from grants to build highways to the mediation of labor disputes. Moreover, the growth over the past fifteen years has been remarkable. This growth, the size of the programs and their many goals lead the 95th Congress to recognize that it was necessary to clearly distinguish between assistance relationships and procurement relationships. As a result Public Law 95-224, enacted on February 3, 1978, includes the following items of importance to the business person:

1. Makes grants and cooperative agreements available to for-profit organizations (i.e. business concerns); and

2. Encourages competition in the awarding of grants and cooperative agreements. (agencies are thus encouraged to solicit competitive proposals)

These items plus the increased clarity and workability of such forms of financial assistance as grants and cooperative agreements make possible a larger number of business opportunities within DOE.

The law distinguishes between procurement contracts and various forms of financial assistance according to their "*principal purpose*". When the principal purpose is acquisition (of goods or services) for the direct benefit of the Federal government then a procurement contract is used. When the principal purpose is the accomplishment of a public purpose through monetary support or stimulation, rather than acquisition, then some form of financial assistance is used.

Whenever a proposal is solicited by DOE, the solicitation will generally state the form of award being considered e.g. contract, grant or cooperative agreement.

DOE provides the following forms of financial assistance:

- grants
- cooperative agreements
- loans
- loan guarantees
- purchase agreements
- market guarantees
- price supports

DOE does provide other forms of assistance but only financial assistance is covered herein and except where stated otherwise only grants and cooperative agreements are being dealt with. The program sources of loans and loan guarantees have been noted, however, and the business person should contact those offices for detailed information on items such as application, eligibility, terms and conditions, and dollar limitations.

The principal thrust of many DOE programs is the support and/or stimulation of innovative energy technology development, new types of fuel and the conservation of the Nation's energy resources. This approach (support and stimulation) has been frequently taken in recent years as Congress enacted new energy programs.

The Department has increasingly utilized financial assistance awards, rather than the more traditional procurement contracts. Moreover, the amount of financial assistance, including grants, loans, cooperative agreements, and loan guarantees, is expected to increase dramatically in fiscal year 1981 alone. As the various processes involved in doing business with DOE are discussed references are made to special considerations for financial assistance.

Initial Processing of Contract or Financial Assistance Actions

The procurement contract and financial assistance processes start with the identification of broad objectives by the program offices or field elements which are then translated into the type of objectives or requirements needed in the solicitation. The next step is for the cognizant office to prepare a statement of work or activity to be pursued which describes the project in as much detail as needed. This provides the basis for the preparation of a procurement/financial assistance request form which is forwarded to the appropriate procurement office for processing.

The procurement office takes the next step by assigning the request to a Contracting Officer who is the designated individual in DOE with the authority to enter into contracts and financial assistance agreements. The "request" is also screened for possible inclusion in certain special programs e.g. labor surplus, women-owned business, small business, small disadvantaged business, etc. These special programs are described in Chapter VI—*Special Programs for Certain Types of Business Organizations.*

Solicitation

A solicitation is the means by which DOE describes its objectives or requirements to the business community. It contains the essential information which must be utilized in preparing a proposal i.e. the Business organizations response. The "request" is analyzed by the Contracting Officer and a decision is made as to the best type of solicitation instrument to be used. A solicitation is then issued by the procurement office.

It is essential that a solicitation be read carefully and completely, to ensure a full understanding of what is required. Questions concerning a particular solicitation should only be directed to the person(s) whose name(s) appear on the solicitation. Follow all instructions to the letter and do not make assumptions without verification. Above all, note carefully the time and place for submission of the response and allow sufficient time to ensure delivery before the time specified. To do otherwise may result in your response being rejected from consideration, irrespective of its merit.

Types of Solicitations

DOE uses several different types of solicitation and notice instruments. Each solicitation usually specifies the type of award to be made. The following is a brief description of each.

Invitation For Bids (IFB)

An IFB is used for soliciting bids when detailed specifications concerning the product or service are known and can be described in a precise way. Requirements solicited under this method are usually for hardware or general supplies. The formal advertising procedures contained in the Federal Procurement Regulations (FPR) as implemented by the DOE Procurement Regulations (DOE-PR) are followed under this method. It should be noted that an IFB requires that all specifications, terms and conditions be accepted without qualification. Award is based on price competition and a fixed price type of contract usually results. All bids are publicly opened and recorded at the time and place specified in the solicitation.

Request For Proposal (RFP)

An RFP is used for soliciting proposals in response to a broader statement of work than would be found in an IFB. An RFP often incorporates performance specifications rather than detailed design specifications. Each RFP sets forth the place, date and time the submission of proposals. The evaluation, selection, negotiation and award process is conducted in accordance with the terms of the solicitation document as well as the FPR and DOE-PR. Either a cost reimbursement type of contract or a fixed price type of contract results from this process.

Program Opportunity Notice (PON)

A PON is a solicitation used principally to solicit competitive proposals relating to nonnuclear energy demonstration projects when there is a stated general objective and an

urgent public need, but no definitive statement of work, and where varied approaches are desired. PONs may result in either the award of contracts or financial assis e agreements and multiple awards m e made.

Program Research and Development Announcement (PRDA)

The PRDA is a solicitation announcement used to solicit a broad mix of research, development, and related non-nuclear energy project proposals. While a Program Opportunity Notice (PON) is geared strictly to accelerating the demonstration of projects utilizing existing, commercially available technology, a PRDA solicits proposals for projects in areas where research and development is required within broadly defined areas of interest but where it is difficult to describe in detail the nature of the work to be undertaken.

A PRDA may be used to solicit proposals for procurement contracts, grants, or cooperative agreements. Multiple awards are generally made which may have dissimilar approaches or concepts. The PRDA seeks to respond to the following:

- Large number of possible approaches available for solving the problem;
- The desirability of using several organizations in solving the problem posed;
- The expectation that many proposers will have qualifications or specialized capabilities that will enable them to perform portions of the program so that the support may be broken into segments that cannot be predicted in advance; and
- The desirability of supporting new and creative solutions.

As can be seen, the PRDA is a very flexible solicitation device.

Program Solicitation (PS)

A Program Solicitation is a notice used to request proposals or applications to be competitively evaluated for DOE financial assistance awards, usually when program needs are clearly defined. It is used to request applications for support grants except when such proposals are obtained as the result of program regulation.

Solicitations for Cooperative Agreement Proposals (SCAP)

The SCAP is used strictly to solicit cooperative agreements proposals for financial assistance. Prepared jointly by the procurement office and the program office it contains the objectives, specifications, schedule, instructions, and other conditions applying to the solicitation and the resulting proposal. In many respects it contains a level of detail comparable to that of an RFP.

Notice of Program Interest (NPI)

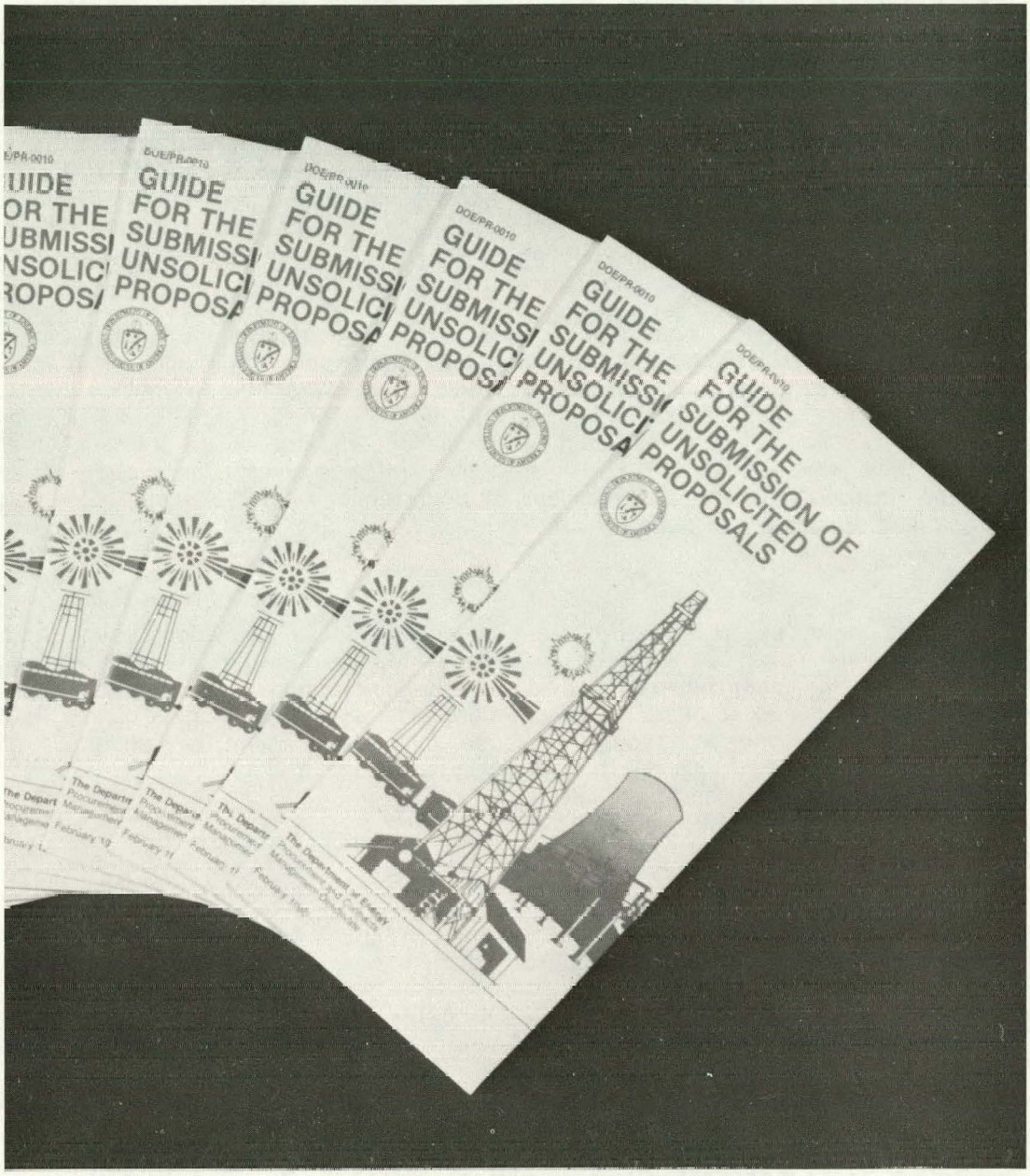
The NPI is not a solicitation. Rather it is a notice in the CBD to individuals and organizations concerning areas of research and other areas where DOE hopes to receive unsolicited proposals. As such it is general and is not intended to limit submittal in any way.

Noncompetitive Procurement Contracts and Financial Assistance Agreements

Unsolicited Proposals

DOE's policy is to encourage the submittal of unsolicited proposal on unique innovative approaches and ideas which may merit public support. When an individual or organization, solely on its own initiative or as a result of a Notice of Program Interest (NPI), submits a specific proposal to perform work it is referred to as an unsolicited proposal. However, unsolicited proposals must contain certain elements in order to be considered. These detailed requirements concerning format and content are available in the pamphlet entitled "*Guide for the Submission of Unsolicited Proposals*" which is included as an insert to this guide. Please read the guide carefully and thoroughly prior to submitting any unsolicited proposal to DOE. Businessmen should be aware that an unsolicited posal cannot be favorably considered w such a proposal duplicates either work underway or contemplated in the immediate

e by DOE. Also remember that DOE has bligation to make an award even if the technical evaluation is favorable since other priorities or funding limitations may preclude such action.



Sole Source Procurement Contracts and Noncompetitive Financial Assistance Agreements

Any solicitation resulting in award of a contract which does not involve competition is considered a sole source procurement. Both procurement and financial assistance regulations and the laws on which they are ed have placed significant emphasis on need for competition. In federal procurement contracting competition is used to the maximum extent possible. Accordingly, competition for DOE award of contracts is viewed as the norm while sole source contracts are considered only on an "exception" basis. In financial assistance competition is encouraged whenever not restricted by law.

Although there are exceptions, there are generally only three situations in which the use of sole source procurement contracts can be justified. They are:

- Situations in which only one firm is capable of providing a needed product or service consistent with schedules which cannot possibly be relaxed.
- Situations in which only one firm can provide a needed product or service of the type or quality required by the government.
- Unsolicited proposals which meet appropriate criteria and which have been accepted.

In financial assistance, noncompetitive awards occur as a result of the following:

- Unsolicited proposals or responses to Notices of Program Interest.
- Eligibility which has been restricted by law or by regulation.
- The decision that only one recipient can be adequately responsive to the support and stimulation being provided by DOE.
- Broad solicitations for non-similar innovative responses.

The intention to make such an award is one which must be fully and adequately justified in writing prior to the making of such an award. This is true of both procurement contracts and of financial assistance agreements except when in the latter case specific statutory or regulatory restrictions exist. Such justifications are usually subject to several levels of review and, if inadequate, may be rejected.

Considerable time and money can be wasted by a business in the pursuit of a noncompetitive award, particularly sole source procurement contracts, when the particular regulations and criteria are not clearly met by the firm under the specific circumstances surrounding the award.

Evaluation Criteria

Each solicitation clearly states the evaluation criteria to be used in judging responses. The solicitation document should be studied carefully prior to making a decision of whether to respond to the solicitation.

Make sure that your organization has a reasonable chance of award by only responding to those solicitations where it can meet all of the requirements listed. Do not waste time or money responding to solicitations where your organization cannot fulfill the stated requirement, or can only fulfill them in a marginal way.

What Happens After Submittal — The Evaluation and Award Process

The DOE has two types of competitive processes, formal advertising and negotiated procurement contracts/financial assistance.

Formal Advertising

In Formal Advertising, characterized by the IFB, the process is fairly simple and straightforward, the bid is publicly opened and recorded and the apparent winner is known immediately based on the total bid price. The Contracting Officer must, of course, verify that the apparent winner is a responsible organization and that all elements of the IFB have been complied with (i.e. specifications, terms and conditions). However, in most cases an award can be made within a short period of time after the opening of bids.

Negotiated Procurement

a. *General*

Negotiated awards which result from RFP's, PON's, PRDA's and PS's and SCAP's (briefly described earlier) quite often involve a substantially longer and complex evaluation process. This is primarily due to the nature of the solicitation.

In negotiated procurement contracts a proposal is frequently divided into three parts, a technical proposal, a business management proposal and a cost proposal, and generally each is evaluated separately. However in both contracts and financial assistance there is generally more emphasis placed on the score of the technical proposal than the business management and cost proposal.

b. *Reviewing and Scoring*

The technical proposal is reviewed and

scored based on the evaluation criteria contained in the solicitation. This evaluation results in a numerical score for all of the factors for award listed in the solicitation as well as a narrative evaluation describing the strengths and weaknesses of each proposal.

The business management portion of the proposal is evaluated to determine the performance potential of the submitting organization and is also used as an aid in determining its understanding of the solicitation. Business management proposals are typically evaluated in terms of:

- Financial condition and capability;
- Business systems;
- Organization and management;
- Past performance;
- Compliance with the solicitation document;
- Stability of the labor-management relations;
- Compliance with equal employment opportunity and affirmative action requirements;
- Facility resources

The cost proposal is typically evaluated based on the following considerations:

- The realism of the proposed cost (in terms of current market conditions), the state of the art, and experience with similar contracts
- The probable costs to the Government, including any changes or improvements to be required by the Government; and
- The maximum probable cost to the Government, to the extent that total or cost ceilings are included.

c. *Competitive Range*
Following the initial evaluation of proposals described above, a competitive range is established. A proposal is in the competitive range "unless it is so technically inferior or out of line with regard to price that meaningful negotiations are precluded." To put it another way, a proposal is in the competitive range unless there is no real possibility that it can be improved to the point where it becomes the most acceptable.

d. *Oral/Written Discussions*
While DOE may accept a proposal, as written at any time, in many cases those organizations judged to be within the competitive range are asked to clarify portions of their proposal through written or oral discussions.

e. *Best and Final Offers*
Based on the issues raised during these oral or written discussions, proposers are given an opportunity to clarify or modify any portion of their proposal in what is termed a "best and final" offer to DOE. Those "best and final" offers have a common cutoff in terms of time, date and location for all proposers.

f. *Selection*
The next step in the process is selection for negotiations. Selection is based upon the final evaluation which takes into account the initial proposal, assessment of oral/written discussions and the "best and final" offer.

g. *Negotiations*
The successful organization(s) will then be contacted to start negotiations, which will normally deal with any outstanding issues and result in the signing of a contract. Note that the steps required by the competitive procurement process can take anywhere from four to seven months to accomplish and occasionally even longer. Business organizations should take this factor into consideration from a planning standpoint in terms of costs, production planning, and allocations of staff resources. All organizations are strongly cautioned not to commence work until and unless directed to do so, in writing, by the Contracting Officer. Only he has the authority to authorize such action or to commit monies to a project.

h. *Notifications*
DOE policy is to notify organizations of the status of their proposals as soon as possible. If, for example, an organization has been determined *not* to fall within the competitive range for a particular solicitation, it can normally be expected to be notified within a short period of time so that resources reserved for that proposal may be released for other purposes. However, organizations with pending proposals should be aware that no information concerning a particular proposal is usually released until the initial evaluation has been completed.

i. *Debriefing*
It is DOE policy to provide unsuccessful proposers, upon written request, with a formal debriefing. Debriefings must be requested from the procuring office within 10 working days after receipt of notification of elimination from consideration or announcement of selection. Debriefings will be scheduled at the earliest feasible time. Note, however,

that debriefings are confined to the areas in which the proposer could have improved its proposal and *not* to discussions of the relative merits of other proposals.

j. *Protest*
If an organization feels that it has not been treated fairly during the procurement process it may choose to file a protest. A protest is a remedy provided by the Federal Procurement Regulations and may be sent to either the Contracting Officer or directly to the Comptroller General of the United States. There is no prescribed format for a protest, but as a minimum, it should ide the solicitation involved and outline the circumstances which have led to the protest being filed. An investigation of the merits of the protest will be conducted and a decision will be given to the protesting organization. Additional avenues of appeal exist under applicable laws and regulations. However, it is recommended that any potential protest first be discussed with the Contracting Officer to see if it can be resolved.

Financial Assistance — Award Process

The award process used in financial assistance is similar in many respects to the process used for negotiated procurement contracts. However, significant differences can result which are largely a consequence of the differing purposes which underly procurement contracts and financial assistance as well as the differing statutory and regulatory requirements under which they operate. In general, there is greater flexibility in making assistance awards than there is in making procurement awards.

The assistance awarding process may contain almost all of the steps used in negotiated procurement, or it may contain only some, but it always focuses on those essential steps required to provide support or stimulation in a timely fashion. While this flexibility generally makes it easier for potential recipients to prepare their proposals, it also places a premium on the careful review of the award process described in each assistance solicitation.

Types of Award Instruments

DOE projects usually fall into one of two classes, procurement or assistance. The determination of whether a project is one of procurement or assistance is made solely by DOE. There are various types of award instruments generally used by DOE i.e. procurement contracts, cooperative agreements and grants. The decision as to which form of award instrument will be used is based on the purpose of the project and the extent of federal involvement necessary to ensure its success. The award instrument identifies the terms and conditions, and the nature of the relationship between DOE and the recipient.

Procurement Contract

A procurement contract is used as the funding instrument whenever the principal purpose is the acquisition by purchase, lease, or barter of property or services for the direct benefit or use of the Federal Government, or whenever DOE determines in a specific instance that the use of a contract is appropriate. There are various types of procurement contract instruments. However, two common types are Firm Fixed Price (FFP) and Cost Plus Fixed Fee (CPFF)

a. *Firm Fixed Price* (FFP) — The FFP contract is one in which a definite price is agreed to before the award of a contract. The price remains firm for the life of the contract and is not normally subject to any adjustment. Under this type of contract the contractor has a great incentive to control costs and to perform efficiently since his profits increase as his costs decrease. Also, this type of contract imposes a minimum of administrative burden on the contractor and DOE, because detailed accounts of direct and indirect costs are not required. FFP contracts are generally used where reasonably definite designs or performance specifications are available and fair and reasonable prices can be estimated and established.

b. *Cost Plus Fixed Fee* (CPFF) — The CPFF contract provides for payment to the contractor of all allowable costs incurred during the performance of the contract. Guidelines as to what costs are considered allowable are contained in Part 15 of the Federal Procurement Regulations (Reference 18). T type of contract also provides for a payment of a fixed fee (i.e. profit) irrespective of the allowable and allocable costs incurred by the

contractor. The fixed fee (profit) dollars can change only when the scope of work under the contract changes. This type of contract also requires audits to be performed of the contractor's accounting records at regular intervals and involves a higher degree of administrative burden by both the contractor and DOE. CPFF contracts are commonly used for research and development and other cases where work specifications cannot be defined exactly and uncertainties involved in performance are so great that a fixed price contract cannot be considered.

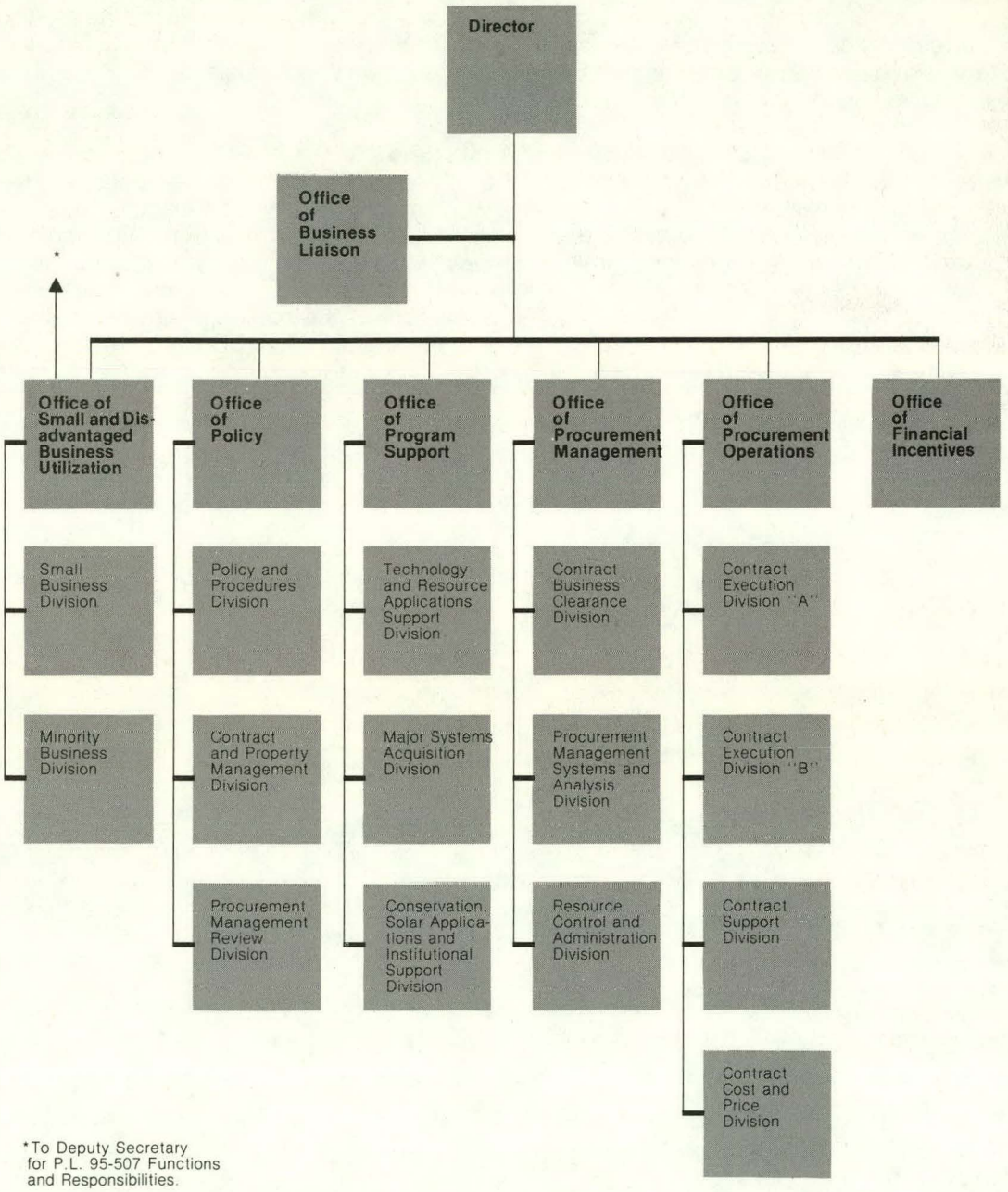
Financial Assistance

An assistance instrument is used whenever the principal purpose of the project is one of support or stimulation authorized by Federal statute. The most common financial assistance instruments used by DOE are as follows:

a. *Grant* — a grant is used when substantial involvement is not anticipated between DOE and the recipient during performance of the project.

b. *Cooperative Agreement* — a cooperative agreement is used when substantial involvement is anticipated between DOE and the recipient during performance of the project. Each cooperative agreement includes a statement of the nature, character and extent of the anticipated DOE involvement.

Procurement and Contracts Management Directorat-



*To Deputy Secretary for P.L. 95-507 Functions and Responsibilities.

Chapter III

How the Directorate of Procurement and Assistance Management is Organized

General

The Secretary of Energy has delegated the procurement and financial assistance authority to the Director of Procurement and Assistance Management. The Director, in turn, has delegated certain authorities to various Heads of Procuring Activities in the field. The Director is, therefore, responsible for the qualitative aspects of the DOE-wide procurement and financial assistance function.

Unique Character of DOE Procurement and Financial Assistance Mission

The mission of DOE is unique in the Federal Government. DOE is not a consumer of its own technology, as is the case with other federal agencies such as DOD and NASA. Rather, DOE's primary mission is to encourage the development of energy resources and the commercialization of energy technology and conservation. In essence, DOE spends the taxpayers money more as a catalyst than as a means of acquiring goods and services for its own needs. As a result, DOE is primarily concerned with the acceleration of energy technology since the normal forces of the marketplace are such that firms will not normally undertake these efforts due to technical and financial risks, long capital investments, and unstable markets.

Role of Director of Procurement and Assistance Management

The Director of Procurement and Assistance Management (PR) is the principal official and business advisor on all procurement, financial assistance and other business arrangements for DOE. The Director of PR is responsible for establishing overall policy and regulations for the Department in the areas of procurement, financial assistance, and contract management. He provides functional management and review of the field buying offices; manages the industry liaison, the small business and small disadvantaged business enterprise, the women-owned business enterprise and labor surplus area programs. He further provides support in advance planning related to procurement and financial assistance programs, and manages the operation of the Source Evaluation Board process.

An organizational chart of the Directorate is shown on the opposite page.

Relationship of Procurement and Assistance Management Directorate and Program Offices

The Director of Procurement and Assistance Management keeps a direct on-going liaison with program officials who generate procurement and financial assistance requirements through the Director's Office of Program Support. Program Support is primarily involved in assisting program officials in the formulation stages of the procurement process. The aid given is generally in the areas of advance procurement planning; business strategy; and major system acquisitions.

Functional Description of the Procurement and Assistance Management Directorate

The Directorate consists of offices each of whom have a unique contribution to make to the procurement and financial assistance process.

OFFICE OF BUSINESS LIAISON

This office is responsible for establishing and maintaining a central point of contact for effective two way communications with the private sector, particularly with groups representing various segments of the business and academic communities, for discussion of matters related to contract policies, procedures, and other procurement matters not identified with a specific solicitation or contract problem. In addition, it coordinates the Consumer Affairs program within the Directorate.

OFFICE OF POLICY

The Office of Policy has primary responsibility for developing, coordinating, establishing, maintaining and revising DOE-wide policy and procedures pertaining to procurement, financial assistance (grants, cooperative agreements, etc.), contract administration, contract pricing and property management. It is also responsible for the assessment of the effectiveness and efficiency of DOE procurement and financial assistance functions. This office works closely with the Office of Small and Disadvantaged Business Utilization in developing policies and regulations affecting the small and small disadvantaged business communities.

OFFICE OF PROGRAM SUPPORT

The Office of Program Support is responsible for providing advice and assistance to Headquarters program offices in the advance planning and business strategy sessions related to procurement, financial assistance and general business matters. This office develops programs related to procurement and financial assistance planning, workload distribution and procurement training for DOE headquarters technical personnel.

OFFICE OF PROCUREMENT MANAGEMENT

The Office of Procurement Management provides support to the Directorate in the development, refinement and operations of DOE-wide procurement and financial assistance information systems, as well as general administrative management for the Procurement and Assistance Management Directorate.

OFFICE OF PROCUREMENT OPERATIONS

The Office of Procurement Operations (Washington, D.C.) is responsible for management of Headquarters procurement operational activities; including the negotiation, award and administration of contracts, grants, cooperative agreements, other assistance instruments, interagency, and intergovernmental agreements. It is the largest Procurement activity within DOE.

OFFICE OF FINANCIAL INCENTIVES

The Office of Financial Incentives is responsible in Headquarters, for the negotiation, execution, and administration of loan guarantees, loans, price supports, and guaranteed market agreements resulting from the Synthetic Fuels, Alcohol Fuels, Biomass, Municipal Waste, Electric Hybrid Vehicle, Coal Loan Guarantee other programs. It assists and supports program offices in the development of program

regulations, plans, and strategies for such initiatives. It also develops departmental policies and procedures for processing financial incentive award instruments.

OFFICE OF SMALL AND DISADVANTAGED BUSINESS UTILIZATION

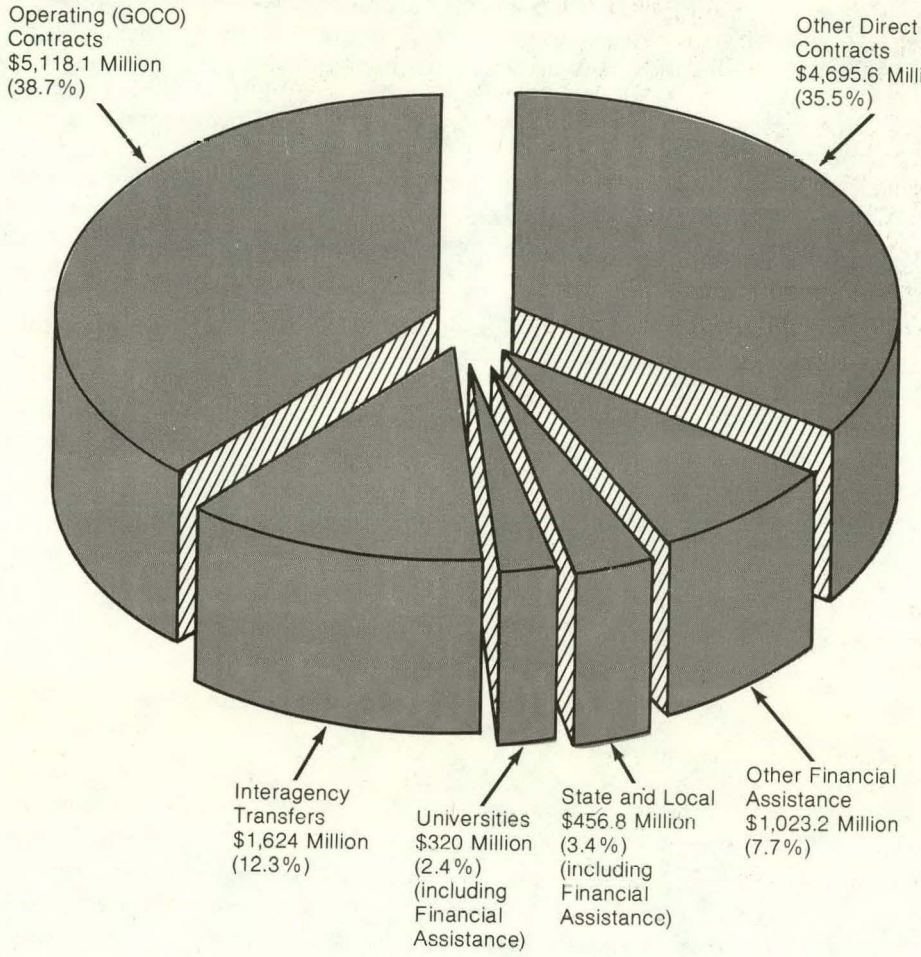
This Office is responsible for an effective small and disadvantaged business program in accordance with the Small Business Act. It also develops programs that will ensure equitable treatment of small, disadvantaged, women-owned, and labor surplus area firms. It is divided into two divisions. The Small Business Division establishes and manages a DOE-wide program for the development and execution of policies and programs for ensuring that an equitable portion of the total contracts and subcontracts for DOE supplies and services are placed with small business, women-owned business enterprises and labor surplus areas.

The Minority Business Division establishes and manages a DOE minority business enterprise program to fully and equitably engage small disadvantaged businesses in DOE prime and subcontract programs, in accordance with the provisions of the Small Business Act. This program includes establishing and tracking of Department awards to minority business firms under Section 8(A) of the Small Business Act, and providing assistance and counseling to business firms.

Pursuant to law, the Director of this Office reports directly to the Deputy Secretary on all PL 95-507 matters.

Figure A

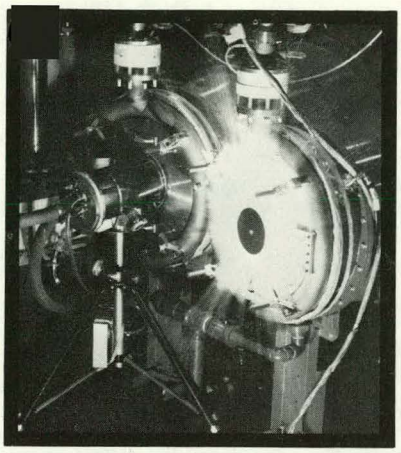
Estimated FY 1980 Contracts, Financial Assistance a Interagency Transfers



Procurement Contracts and Financial Assistance
$11,613.7 Million
(87.7%)

Interagency Transfers
$1,624.0 Million
(12.3%)

Planned Obligations
$13,237.7 Million
(100.0%)



Chapter IV

How Much We Buy

General

The Department of Energy secures an unusually broad range of products, goods and services every year. DOE procurement contracts and financial assistance have approximated $10 billion each year since the Department was formed on October 1, 1977.

In FY 1980. However, planned procurement plus financial assistance dollars were over $11.6 billion as shown in Figures A and B. In FY 1981, the planned awards exceed $16 billion.

Changes In Program Dollars

The size, number and type of contract and financial assistance actions vary from year to year according to Presidential initiatives and legislative priorities. For example, the renewed emphasis upon alternative fuels is reflected in the planned increases from FY 1980 to FY 1981. The businessperson should be alert to such developments and changes.

Contract and Financial Assistance vs. Non Procurement Dollars

An examination of Figures A and B provides some insight which is valuable to the business person. In Figure A, it becomes clear than an estimated $1.6 billion is "non-procurement" i.e. efforts transferred to other federal agencies. Thus out of $13.3 billion only $11.6 billion is actually available for contract and financial assistance purposes.

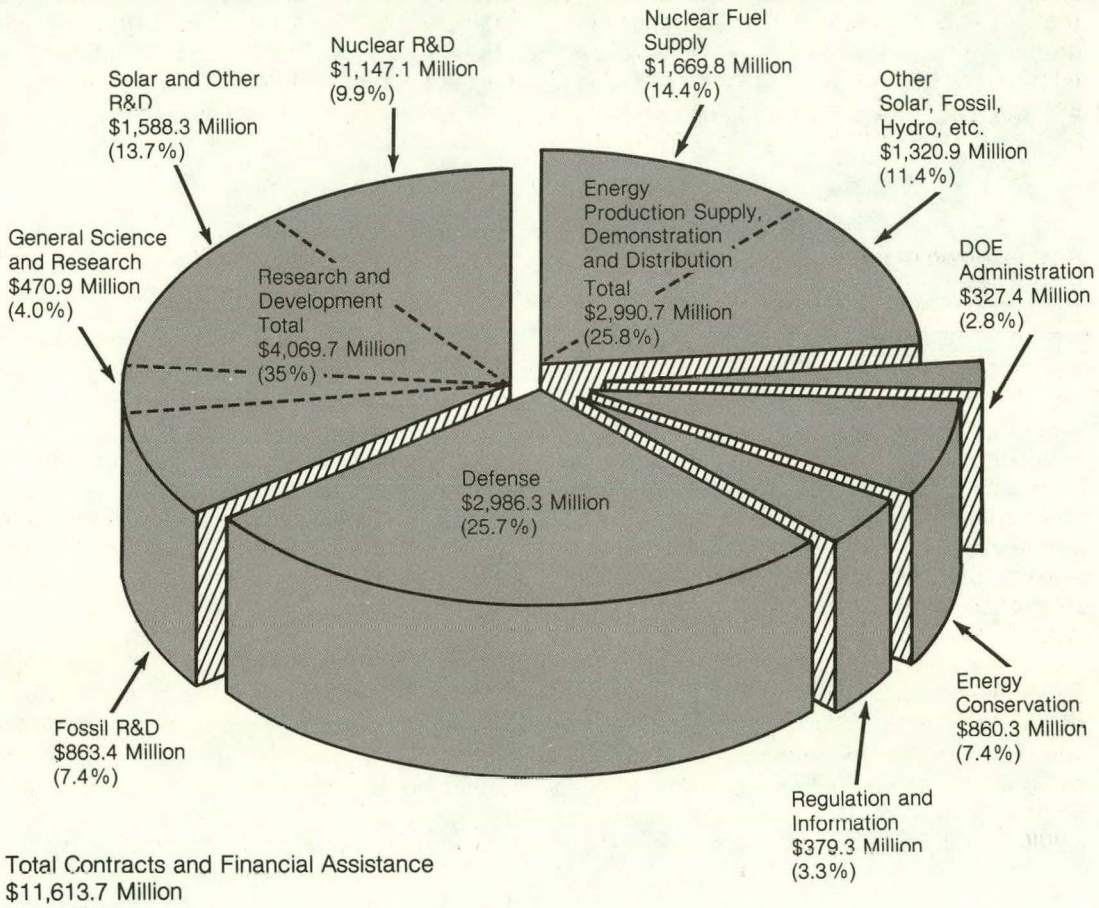
Operating Contracts vs. Other Procurement Contracts and Financial Assistance

One approach to understanding the DOE business activity is to examine the "Operating Contractor" concept and its impact. The Atomic Energy Commission did not directly staff and run its laboratories. Instead it developed a field structure which consisted of Government Owned Contractor Operated (GOCO) facilities. The Energy Research and Development Administration (ERDA) inherited this structure plus certain government owned and operated (GOGO's) ties of the Department of Interior which later became the Energy Technology Centers. These basic elements were transferred to DOE and account for a considerable portion of the contracting activity.

A glance at Figure A indicates the importance of this relationship to those seeking to do business with DOE. Nearly 39% of the FY 1980 total planned for procurement contracts and financial assistance was scheduled to be spent on or by Operating Contractor's (GOCO's). In past fiscal years this has exceeded 50% due to the smaller amounts of Financial Assistance. Please note that in fiscal year 1980 over one-half (52.1%) of all contractual monies goes to GOCO's i.e. $5,119.1 million of $9,813.7 million. When viewed from this perspective, the business person can clearly see the Operating Contractors as a major potential source of business via subcontracting.

Figure B

Estimated FY 1980 Procurement Contract and Financial Assistance Distribution by Usage



Total Contracts and Financial Assistance
$11,613.7 Million
(100.0%)

Contracts
$9,813.7 Million
(84.5%)

Financial Assistance
$1,800 Million
(15.5%)

(Non-Procurement Is Not Included)

Procurement Distribution by Usage

econd approach to examining DOE ness activity is given in Figure B. Here it is shown that the estimated dollars ($11.6 billion) have six primary missions. The Defense portion is handled almost entirely by the Assistant Secretary for Defense Programs and accounts for 25.7% of anticipated procurement contracts/financial assistance. The Research and Development portion of the budget is $4.07 billion or 35 percent. Energy production, supply, demonstration and distribution accounts for an additional 25.8%. Together, these three missions comprise 85.6% of the DOE procurement contracts and financial assistance in FY 1980. Energy Conservation provides $860.3 million (7.4%) and Regulation/Information an additional 3.3%. This accounts for 97% of the planned DOE procurement/financial assistance in FY 1980.

Procurement and Financial Assistance by Program Office

A breakdown of the same $11.6 billion is provided by Program Office in Table IV-1. Estimates are provided for both FY 1980 and FY 1981. The reader should remember that these may be subject to change as Executive branch initiatives and legislative priorities alter. (Chapter VII describes the Program office structure in greater detail.) This is a third and useful approach in seeking to understand DOE procurement/financial assistance. Do not forget, however, that a substantial portion of the funds are dedicated to operating contractors (GOCO's).

Examination of the estimated procurement/financial assistance by program areas will resolve some of the problems faced by those seeking to do business with DOE in particular areas. For example, all of the nuclear waste management program is under the Assistant Secretary for Nuclear Energy. This includes both commercial and defense nuclear waste. In the same way, it becomes clear that the Assistant Secretary for Fossil Energy and the Assistant Secretary for Resource Applications are involved in differing aspects of coal, oil and gas programs.

Finally, note that every program office either directly or through GOCO's utilizes a broad, range of business and technical services and supplies. This may range from maintenance and guard services, through all forms of support services, to scientific, engineering, construction services and supplies. Many business persons will therefore wish to market several program sectors, as well as pay close attention to CBD announcements of procurement needs by the various offices.

Table IV-1.

Summary of DOE Program Activity

Estimated Procurement Contracts and Financial Assistance by Office

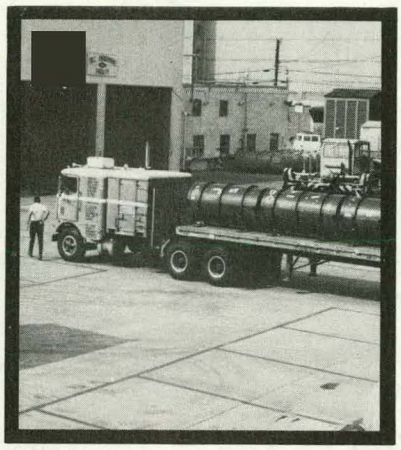
Programs	FY 1980* $ (Millions)	FY 1980* % DOE Total	FY 1981* $ (Millions)	FY 1981* % DOE Total
Energy Research (ER)				
Fusion Energy (Magnetic)	352.5		400.5	
High Energy Physics	324.5		358.0	
Nuclear Physics	104.4		115.2	
Basic Energy Sciences	226.9		257.4	
Technical Assessment	13.5		21.3	
Program and Policy Analysis	2.0		2.0	
General Purpose Facilities	—		60.3	
University Research Support	7.1		14.3	
Subtotal	1,030.9	8.3	1,229.0	7.6
Environment (EV)				
Life Sciences & Nuclear Medicine	42.0		48.6	
Environmental Overview and Assessment	56.4		62.8	
Biological and Environmental Research	168.9		187.2	
Subtotal	267.3	2.3	298.6	1.8
Fossil Energy (FE)				
Coal	767.2		1,038.8	
Petroleum	60.6		62.9	
Gas	35.6		30.8	
Subtotal	863.4	7.4	1,132.5	7.0
Defense Programs (DP)				
Internal Confinement Fusion	194.9		202.0	
Weapons Activity	1,616.6		1,934.1	
Materials Production	521.7		522.5	
Verification and Control	37.9		41.4	
Security Safeguards, Investigations	62.8		66.8	
Subtotal	2,433.9	21.0	2,766.8	17.1
Conservation and Solar Energy (CS)				
Conservation				
Energy Storage	65.0		70.8	
Buildings and Community Systems	104.7		97.6	
Industrial Conservation	60.3		58.9	
Transportation	112.3		105.5	
State and Local	456.8		436.3	
Multi-Sector	16.9		29.2	
Energy Information	0		0	
Energy Impact Assistance	44.3		48.8	
Subtotal Conservation	860.3	7.4	847.1	5.3
Solar				
Alcohol Fuels**	78.0			
Solar Demonstration	17.8		8.0	
Solar Applications	134.2		153.5	
Solar Technology	443.4		441.8	
Subtotal Solar	673.4	5.8	603.3	3.7
Subtotal (C & S)	1,533.7	13.2	1,450.4	8.9

Programs	FY 1980* $ (Millions)	FY 1980* % DOE Total	FY 1981* $ (Millions)	FY 1981* % DOE Total
Resource Applications (RA)				
Hydrothermal	9.9		10.0	
Hydropower	23.0		18.2	
Electric Energy Systems	36.0		39.0	
Geothermal Energy	138.4		142.0	
Uranium Enrichment	1,305.1		1,373.5	
Uranium Resource Assessment	64.7		35.7	
Power Marketing	164.5		175.2	
Alternative Fuels	144.0		2,216.0	
Strategic Petroleum Reserves	800.0		2,404.0	
Coal Resource and Supply	4.3		6.2	
Oil and Gas	85.2		157.6	
Leasing, Multi-Resource	3.2		4.3	
Subtotal	2,778.3	23.9	6,581.7	40.7
Nuclear Energy (NE)				
Naval Reactor Development	269.6		295.0	
Advanced Nuclear Systems	38.4		43.0	
Gas Cooled Thermal Reactors	—		—	
Thermal Reactor Systems	57.0		48.5	
Advanced Reactor Systems	7.5		5.0	
Advanced Isotope Separation Technology	55.7		86.9	
Light Water Reactors	—		—	
Breeder Reactors	750.4		372.8	
Commercial Waste	220.1		298.9	
Defense Waste	282.8		348.0	
Spent Fuel	18.0		20.0	
Spent Fuel Storage	300.0		—	
Subtotal	1,999.5	17.2	1,518.1	9.4
Other DOE				
Federal Energy Regulatory Commission (FERC)	72.5		76.4	
Energy Information Administration (EIA)	108.4		116.2	
Economic Regulatory Admin. (ERA)	198.4		162.5	
Policy and Evaluation (PE)	16.5		19.6	
Management/Support	263.6		292.3	
Intergovernmental/ Institutional	30.6		37.3	
International	3.5		5.1	
Alcohol Fuels**	(see CS)		484.0	
Other Support	13.2		13.7	
Subtotal	706.7	6.1	1,207.1	7.5
Grand Total	$11,613.7	100.0	$16,184.2	100.0

E ...tes as of April 30, 1980

** ...endent Office effective August 1, 1980*

Work at Lawrence Berkeley Laboratory



CHAPTER V

What DOE Buys By Lead Mission Assignment

Introduction

This chapter provides an alphabetical list of program activities involving procurement/financial assistance by "lead mission assignments." Lead mission assignments within DOE involve the delegation of significant technical or project authority and responsibilities to elements of the field organization. Overall program responsibility remains at headquarters. Lead mission assignments to operations offices and laboratories involve field management, planning and administrative support, and arranging for technical support from laboratories or contractors in specified areas.

In general, a lead operations office plays an important role in project management and execution, and is held accountable by headquarters for the required Government overview of the work. In these cases formal actions affecting a contractor's assignments flow through the administrative channel of the operations office providing one centralized point of review, coordination, interpretation, concurrence, and approval within DOE.

A few major lead mission assignments to operations offices include both administrative and technical management responsibility. Many others combine the lead responsibility, including a laboratory to perform technical direction and an operations office accountable to headquarters for overall management. Headquarters program staff formulates policy and program guidance and allocates funding levels to the field offices which, in turn, implement, direct and control the activities through DOE contractor organizations.

The contractors thus have technical responsibility and broad latitude in operating the facilities owned by the Goverment (GOCO's). We have previously stressed the importance of GOCO's in seeking business.

The degree of responsibility may vary substantially. In some cases, the field facility provides only technical assistance in program planning, and/or the review and evaluation of proposals. Further details on the specific lead mission and its impact on your business endeavors should be obtained by contacting the persons set forth in the enclosed Directory.

Table V-I—Codes for Secretarial Offices and Other Federal Agencies

CODES	SECRETARIAL OFFICE
US	UNDERSECRETARY
CS	CONSERVATION AND SOLAR
EV	ENVIRONMENT
RG	ECONOMIC REGULATORY ADMINISTRATION
EI	ENERGY INFORMATION ADMINISTRATION
DP	DEFENSE PROGRAMS
FE	FOSSIL ENERGY
RA	RESOURCE APPLICATIONS
NE	NUCLEAR ENERGY
CA	CONSUMER AFFAIRS
NRC	NUCLEAR REGULATORY COMMISSION
AD	ADMINISTRATION
FERC	FEDERAL ENERGY REGULATORY COMMISSION
IA	INTERNATIONAL AFFAIRS
OGC	OFFICE OF GENERAL COUNSEL
LA	LEGISLATIVE AFFAIRS
OSDBU	OFFICE OF SMALL AND DISADVANTAGED BUSINESS UTILIZATION
PE	POLICY AND EVALUATION
ER	ENERGY RESEARCH

OTHER FEDERAL AGENCIES

DOI	DEPARTMENT OF INTERIOR
HUD	HOUSING AND URBAN DEVELOPMENT
ICC	INTERSTATE COMMERCE COMMISSION
USCG	U.S. COAST GUARD
EPA	ENVIRONMENTAL PROTECTION AGENCY
ARMYNAT	DOD U.S. ARMY — NATICK LABORATORY
NASAJPL	NASA — JET PROPULSION LABORATORY
NASALRC	NASA — LEWIS ENERGY RESEARCH CENTER
NASAMAR	NASA — MARSHALL SPACE FLIGHT CENTER
USDA	UNITED STATES DEPARTMENT OF AGRICULTURE

Table V-2—DOE FACILITY IDENTIFICATION CODES

CODES	DOE FIELD FACILITY OR ORGANIZATION	SECRETARIAL OFFICE
ALO	ALBUQUERQUE OPERATIONS OFFICE	DP
AMES	AMES LABORATORY	ER
ANL	ARGONNE NATIONAL LABORATORY	ER
APA	ALASKA POWER ADMINISTRATION	RA
BETC	BARTLESVILLE ENERGY TECHNOLOGY CENTER	FE
BNL	BROOKHAVEN NATIONAL LABORATORY	ER
BPA	BONNEVILLE POWER ADMINISTRATION	RA
CORO	CHICAGO OPERATIONS AND REGIONAL OFFICE	US
CRBR	CLINCH RIVER BREEDER REACTOR PROJECT OFFICE	NE
FFTF	FAST FLUX TEST FACILITY PROJECT OFFICE	NE
GFETC	GRAND FORKS ENERGY TECHNOLOGY CENTER	FE
GJFO	GRAND JUNCTION FIELD OFFICE	RA
HEDL	HANFORD ENGINEERING DEVELOPMENT LABORATORY	NE
IDO	IDAHO OPERATIONS OFFICE	US
INEL	IDAHO NATIONAL ENGINEERING LABORATORY	NE
LANSL	LOS ALAMOS NATIONAL SCIENTIFIC LABORATORY	DP
LBL	LAWRENCE BERKELEY LABORATORY	ER
LETC	LARAMIE ENERGY TECHNOLOGY CENTER	FE
LLNL	LAWRENCE LIVERMORE NATIONAL LABORATORY	DP
METC	MORGANTOWN ENERGY TECHNOLOGY CENTER	FE
NVO	NEVADA OPERATIONS OFFICE	DP
ORNL	OAK RIDGE NATIONAL LABORATORY	ER
ORO	OAK RIDGE OPERATIONS OFFICE	US
ORO-PAO	OAK RIDGE PIKETON AREA OFFICE	US
PA	POWER ADMINISTRATION	RA
PNL	PACIFIC NORTHWEST LABORATORY	NE
PETC	PITTSBURGH ENERGY TECHNOLOGY CENTER	FE
PPPL	PRINCETON PLASMA PHYSICS LABORATORY	ER
R-HO	ROCKWELL INTERNATIONAL—HANFORD OPERATION	NE
R-RF	ROCKWELL INTERNATIONAL—ROCKY FLATS	DP
RLO	RICHLAND OPERATIONS OFFICE	US
SANDIA	SANDIA NATIONAL LABORATORIES	DP
SERI	SOLAR ENERGY RESEARCH INSTITUTE	CS
SEPA	SOUTHEAST POWER ADMINISTRATION	RA
SFO	SAN FRANCISCO OPERATIONS OFFICE	US
SPRO	STRATEGIC PETROLEUM RESERVE OFFICE	RA
SRL	SAVANNAH RIVER LABORATORY	DP
SRO	SAVANNAH RIVER OPERATIONS OFFICE	DP
SWPA	SOUTHWEST POWER ADMINISTRATION	RA
US-AF	UNDER SECRETARY OFFICE OF ALCOHOL FUEL	US
WAPA	WESTERN POWER ADMINISTRATION	RA

Table V-3—Lead Mission Offices and Laboratories

Mission	Secretarial Office	Field Office	Laboratory
Agricultural processes energy conservation	CS	CORO/USDA	SERI
Agricultural & Industrial solar process heat	CS	CORO	SERI/LANSL
Agricultural solar demonstrations	CS	USDA	
Air pollution	EV	CORO/AL	ANL/SANDIA
Alcohol Fuels	US-AF		
Allocations (Gas, Oil, etc.)	RG		
Alternative fuels	CS		
Annual Cycle Energy Systems (ACES) Solar	CS	ORO	ORNL
Appliance Standards	CS		
Applied Analysis Programs	EI		
Appropriate Technology	CS	Regions	
Asphalt Technology	FE	LETC	
Atmosphere fluidized bed combustion technology (Coal)	FE/RA	METC	
Automotive propulsion systems	CS	NASALRC/ NASAJPL	
Basic Energy Science—			
Analysis of Basic Research for Conservation Technologies	ER	SFO	LBNL
Analysis of Basic Research for Energy Storage, Transmission and Conservation Technologies	ER	CORO	BNL
Analysis of Basic Research for Environmental Control Technologies	ER	CORO	AMES
Analysis of Basic Research for Fission Energy Technologies	FR	CORO	ANL
Analysis of Basic Research for Fossil Energy Technologies	ER	ORO	ORNL
Analysis of Basic Research for Fusion Energy Technologies	ER	SFO	LLNL
Analysis of Basic Research for Geothermal Energy Technolgies	ER	ALO	LANSL
Combustion Diagnostics Program	ER	ALO	SANDIA
Experimental Program Management For High Flux Beam Reactor	ER	CORO	BNL
Experimental Program Management For High Flux Isotope Reactor	ER	ORO	ORNL
Experimental Program Management For Synchrotron Light Source	ER	CORO	BNL
National Resource for Computation In Chemistry	ER	SFO	LBNL
Batteries, vehicle	CS	CORO	ANL
Biomass	CS	CORO	SERI
Biomedical & Environmental Research	ER/EV	CORO	AMES/BNL
Breeder Reactor Plant Construction	NE	CRBR	
Breeder Reactor Components	NE		
Building Controls & Standards	CS	SFO/CORO	ETEC/HEDL
Citizens Participation	CA	REGIONS	BNL
Clinch River Fast Breeder Reactor	NE	CRBR	
Coal-			
chemistry	FE	CORO	AMES
combustion technology	FE/RA	METC	
conversion technology	FE	PETC	

Mission	Secretarial Office	Field Office	Laboratory
gasification technology	FE	METC/LETC	LLNL
production technology	RA	PMC/CMC	
reserves, statistics	EI		
technology analysis	EI		
transportation	EI		
fly ash	FE	CORO	AMES
Coal Industry			
financial assistance	RA/FE		
health	EV/FE		
lands-leasing	RA/DOI		
liquefaction	RA/FE	METC/GFETC ORO/ALO	SANDIA
loan guarantee program	RA/FE		
Coal mine lands—reclamation	DOI		
Coal slurry pipeline	FE	METC	SANDIA
Cogeneration	CS	SFO	
Combustion technology	RA/FE	METC	
Commercial buildings			
energy efficient design	CS		
solar active heating/ cooling systems	CS	ALO	SANDIA
Commercialization	RA/CS		
Community conservation practices	CS	Regions	
Conservation materials standards	CS		
Construction	RA/DP/ NE/US	ALO/CORO/ IDO/ORO/ SFO/WAPA/ SPRO	BNL/INEL/ LANSL/ SANDIA/ HEDL/ORNL
Consumer impacts	CA	Regions	
Data Validation	EI	ORO	ORNL
Demonstration Programs	HUD/CS/ RA	NVO	
Diesel fuel			
conservation targets	C&S		
prices	ICC		
Energy Conservation Standards			
existing buildings	CS		
Energy Education	CA/CS		
Energy inventions	CS		
Energy Storage—Compressed Air	CS	RLO/CORO	PNL
Enhanced recovery of petroleum	FE/RA/CS	CORO/SFO/ BETC	LLNL
Enhanced recovery of natural gas	FE/RA	BETC	
Entitlements	RG		
Environmental Impact research	EV	CORO	AMES
Environmental and Health	EV	CORO	BNL
Enzymatic Hydrozysis of Cellulose	CS	ARMYNAT	ANL
Ethanol	CS	BETC	
Exhibits	PA/CS		
Exp censes			
n ar materials	NRC		
External combustion engines	CS		
Energy systems, advanced	ER	CORO	BNL

Mission	Secretarial Office	Field Office	Laborato---
Economic analysis	EI		
Economic forecasts	EI		
Education affairs	CA/CS		
Electric Power—			
consumption analysis	EI		
dispersed generation	RA	PA	
networks	RA	PA	
production statistics	EI		
rates analysis	EI		
rates regulation, interstate	FERC		
regulation	FERC		
storage systems	RA	CORO	BNL
transmission lines	FERC/RA		
Electric Vehicles	CS	NVO/ NASALRC	
Emergency regulations	RG		
Emergency energy resources	EI		
Energy audit—small business	CS		
Energy Conservation—			
agriculture	CS	CORO	SERI
analysis	EI		
buildings	CS	SFO	LBNL
community	CS	CORO	ANL
food industry	CS	IDO	INEL
institutional buildings	CS		
methodologies	CS		
small business	CS		
standards-appliances	CS		
state programs	CS	REGIONS	
tax credits	CS		
technology	CS		
transportation	CS		
unsolicited proposals	CS	IDO	INEL
Energy Information Data	EI	ORO	ORNL
Federal lands—leasing	DOI/RA		
Fireplace devices—retrofit	CS		
Flu dampers	CS		
Fly Ash	FE	CORO	AMES
Forest residues—combustion	CS		
Fossil Fuel Processing	FE	CORO/ORO	ORNL
Low BTU	FE	CORO	
Solvent Refined	FE	ORO	ORNL
Fuel Oil—			
regulation	RG		
statistics	EI		
Fusion power—			
economics	ER		
experiments	ER/RA	CORO/SFO	LLNL/BNL
Fusion technology—			
environmental impact	ER/EV		
safety	ER		
Fossil energy data	EI	ORO	ORNL
Fusion, magnetic	ER	CORO/RLO/ IDO/SFO	INEL/LLNL/ PPPL
Fusion, magnetic, computer center	ER/DP	SFO	LLNL
Fusion Experiments, electron & Light Ion Beam	DP	ALO/SFO	SANDIA/ LANSL/LLNL
Gas centrifuge technology	RA	ORO	

Mission	Secretarial Office	Field Office	Laboratory
Gas fired space conditioning systems	CS		
Gas turbine engines	CS	NASA LRC	
Gaseous diffusion plants	RA	ORO	
Gaseous fuels—			
enhanced recovery	FE/RA		
Gasohol	CS	BETC	
Gasoline—			
analysis	EI		
conservation targets	CS		
prices	RG		
rationing	RG		
statistics	EI		
Geothermal	RA	SFO/IDO	INEL
Geothermal Scale Buildings	RA	SFO	LLNL
Geothermal lands—			
grants	RA	SFO	
leasing	RA		
Geothermal—			
Advanced technology	RA	ALO	LANSL
Direct thermal application	RA	IDO	INEL
Environmental impact assessments	RA	ORO	ORNL
Gulf Coast geopressure resource management	RA	NVO	
Rocky Mountain basin	RA	IDO	
Well drilling & completion technology	RA	ALO	SANDIA
50 MWE geothermal demo plant	RA	SFO	
Industry coupled drilling	RA	NVO	
Utilities technology development	RA	CORO/ORO	BNL/ORNL
Glass Furnace Enchancement	CS	IDO	INEL
Hazardous substance spills	USCG		
Heat pumps	CS		
High BTU coal gasification	FE	PETC	
High energy physics	ER	CORO	BNL
Hospital—grants	CS		
Hybrid vehicles	CS	NASALRC/ NVO	
Hydroelectric facilities—			
construction	RA	PA	
licensing	FERC		
small scale	RA		
upgrading	RA	PA	
Hydroelectric Power—			
generation	RA	PA	
marketing	RA	PA	
research & development	RA		
Hydrogen	CS		
Hydrothermal—Low Head	RA	IDO	INEL
Import Licenses			
nuclear materials	NRC		
petroleum	RG		
Inc and—leasing	DOI		
Inc... liquefaction	FE	BETC/LETC	
Industrial atmospheric fluidized bed	RA/FE	METC	

Mission	Secretarial Office	Field Office	Laboratory
Industrial cogeneration	CS	SFO	SANDIA
Industrial energy audits	CS		
Industrial energy conservation, Direct reduction of aluminum	CS		INEL
Industrial process heat solar thermal energy	CS	NASAMAR	
Industrial waste	CS	IDO	INEL
Infrared techniques	CS		
Isotope Separation Laser	NE	SFO/ALO	LLNL/LANSL
Institutional buildings energy conservation	CS	NASAMAR/ SFO	LBNL
Insulation	CS		
Internal combustion engines and carburetors	CS		
International Affairs	IA		
International energy analysis	EI	CORO	ANL
International statistics	IA/EI		
Inventions	CS		
Inventors assistance	CS		
Labor Affairs	IA		
Laser Technology	NE	SFO/ALO	LLNL/LANSL
Library Services	OGC/AD		
Licensing	RG/NRC		
Lighting—efficiency standards	CS		
Liquefaction— see coal liquefaction indirect liquefaction			
Loan guarantees, Coal	RA		
Low BTU Coal gasification	FE	CORO	
Low head hydro	RA	IDO	
Low income assistance	CS/RG		
Low income weatherization	CS	Regions	
Low temperature process	CS		
Macroeconomic analysis	EI		
Magnetohydrodynamics (MHD)	FE	IDO/CORO	
Mass transit	CS		
Medium—BTU coal gasification	FE		
Methanol	CS	BETC	
National Energy Info Center	EI		
National Solar Heating & Cooling Info. Center	EI		
Natural gas— commercialization of enhanced recovery technology	RA	SFO/BETC	
offshore drilling	FE		
price regulations	FERC		
production	EI		
regulation	RG/FERC		
reserves	EI		
statistics	EI		ORNL
technology	FE	BETC	
transportation	RA		
transportation regulation	FERC		
Natural gas lands—leasing	RA		
Natural gas liquids— policy	PE		
regulations	RG		

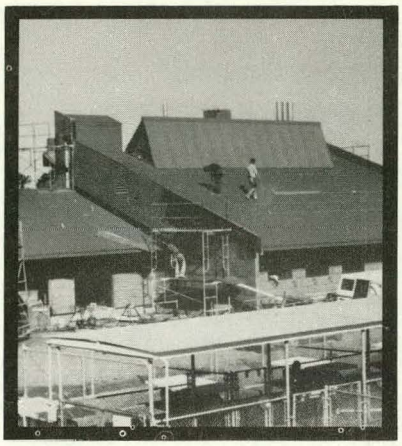
M on	Secretarial Office	Field Office	Laboratory
reserves	EI		
statistics	EI		ORNL
Nuclear accident, computer modeling	DP/NRC		LANSL
Nuclear advanced systems & Mat'ls production	NE	IDO/SFO/ ALO	LANSL/INEL
Nuclear emergency search team	DP	NVO	SANDIA
Nuclear facilities—			
licensing	NRC		
regulation	NRC		
siting	NRC		
Nuclear field cycle	NE		
Nuclear Isotope separation technology	NE	SFO/ALO	LLNL/LANSL
Nuclear materials—			
transportation systems	DP	ALO	SANDIA
regulation	NRC		
Nuclear Physics	ER	ALO/SFO/ CORO/ORO	LANSL/LBL/ BNL/ORNL/ ANL
Nuclear power—			
analysis	EI		
breeder reactors	NE	CRBR	
costs	EI		
demand	EI		
environmental impact	NRC/EV	RLO	PNL
fusion technology	ER/DP	CORO/DLO/ ALS/SFO	SANDIA/ LLNL/LANSL
quality assurance	NE		
reactor research	NE	CORO	ANL
regulation	NRC		
safeguards	NRC/DP/ ER	IDO/ALO	INEL/LANSL/ SANDIA
spent fuel reprocessing; storage	NE	SRO	SRL
statistics	EI		
supply forecasts	EI		
uranium	EI/RA	GJFO	
waste management	NE	RLO/SRO/ ORO	SRL/ORNL/ HEDL
Nuclear reactor safety code			LANSL/INEL
Nuclear reactors—research	NE	SFO/RLO/ CORO	
Nuclear test operations	DP	NVO	SANDIA
Nuclear waste decontamination	NE	IDO	
Nuclear waste management	NE	IDO/RLO/ ALO	INEL/LANSL/ SANDIA
Nuclear waste storage	NE	ORO/SRO	
Nuclear weapons, R&D	DP	SFO/ALO	LANSL/ SANDIA/LLNL
Nuclear weapons, production & surveillance	DP	ALO	SANDIA
N ar safeguards, security, ountability	DP	ALO	SANDIA/ LANSL
Ocean Thermal Energy Conservation (OTEC)	CS	SFO	

Mission	Secretarial Office	Field Office	Laborato
Offshore drilling	FE		
Oil burner retrofit	CS		
Oil fired space conditioning systems	FE/RA		
Oil shale—			
commercialization	RA	RLO	PNL
computer modeling		GJFO	LLNL
enhancement	FE/CS	ALO	SANDIA
processing technology	FE		
recovery-in-situ, demonstration	FE	SFO/LETC	
Oil shale lands-leasing	RA		
OTEC - see Ocean Thermal Energy Conversion	CS		
Outer Continental Shelf	FE		
Particulate Removal, stack	FE	RLO	PNL
Passive solar energy systems	CS	CORO	SERI
Petrochemical substitutues	CS		
Petroleum			
allocations	RA		
chemical extraction	RA/FE	LETC/BETC	
consumption	EI/CS		
consumption international	IA/EI	ORO	ORNL
decontrol	PE/RG		
demand	EI/DOC		
demand forecasts	EI	ORO	ORNL
demand restraints	PE		
enhanced recovery	RA/FE		
entitlements	RG		
exploration—international	IA		
exports—international	IA/EI/RG	ORO	ORNL
gas miscible extraction	RA/FE		
imports	EI	ORO	ORNL
imports—international	IA/EI	ORO	ORNL
imports—licensing	RG		
imports regulation	RG		
in-situ combustion technology	RA/FE	LETC	
offshore drilling	FE		
petroleum products	EI		
policy	PE/FE		
price regulations	RG		
prices-Organization of Petroleum Exporting Countries	IA/EI	ORO	ORNL
production	EI		
refining	FE		
regulation	RG		
reserves	EI/RA		
reserves—international	IA/EI		
statistics	EI	ORO	ORNL
supply forecasts	EI		
technology	FE/RA		
thermal extraction	FE/RA	SFO/LETC	
transportation	RA	BETC	
Petroleum companies—			
compliance audits	RG		
special investigations	RG		
windfall profits	PE		
Petroleum lands—leasing	DOI/RA		

Mission	Secretarial Office	Field Office	Laboratory
Petroleum pipelines	FERC/RA		
Petroleum products			
demand forecasts	EI		
imports	EI		
Petroleum refineries—			
licensing	RG		
policy	PE		
Petroleum technology—			
commercialization	RA		
environmental impact	EV		
Photovoltaics	CS	SFO/ALO	SANDIA
Photochemical research	ER	CORO	AMES
Pipelines	FERC/RA		
Portsmouth uranium			
enrichment plant	RA/US	OR-PAO	
Price forecasts—			
international	EI		
midterm-shortterm	EI		
Prices—			
diesel fuel	EI		
gasoline	RG		
heating oil	RG		
international	EI/IA	ORO	ORNL
Propulsion systems	CS	NASALRC	
Pollutants	EV/FE/NE	CORO	ANL
Radiation—			
environmental impacts	EV		
health impacts	EV		
Rationing	RG		
Reactor Physics	ER	CORO	ANL
Reactor Research & Technology	NE	SFO/CORO/ RLO	HEDL/ANL/ FFTF
Reclamation of			
abandoned mine lands	DOI		
Refinery technology	FE		
Renewable energy			
sources—use by states	CS	Regions	
Residential building retrofit	CS	SFO	LBL
Schools and Hospitals	CS	SFO	LBL
Small business	OSDBU		
Small scale appropriate			
technology grants	CS	Regional offices	
Solar cooling	CS	SERI	
Solar energy			
collector—development	CS	ALO	LANSL
conferences	CS		
controls—development	CS	SFO	LBL
demonstration programs	HUD/CS	CORO/ALO	NASAMAR/ SANDIA
exhibits	CS		
federal buildings	CS		
grants	CS		
industrial uses	CS		
sive development	CS	CORO	SERI
power generation	CS		
power system, thermal			
central	CS	SFO/ALO	SANDIA

Mission	Secretarial Office	Field Office	Laboratory
research & development	CS	CORO	SERI
receiver, 10 MWE	CS	SFO/ALO	SANDIA
statistics	EI		
thermal	CS	SFO	
Solar heating & cooling	CS/HUD		
Solar industrial process heat	CS		
Solar power towers	CS		
Solar systems analysis	CS	CORO	SERI
Solar thermal energy	CS	SFO/CORO	ANL
Space power systems, research	ER	CORO	ANL
Spent fuel reprocessing	NE	IDO	INEL
Spent fuel storage	NE	RLO	HEDL
Spent fuel transfer	NE	SRO	SRL
State conservation programs	CS	Regions	
State grants	CS	Regions	
Sterling engines	CS		
Strategic Petroleum Reserve	RA	SPRO	
Strip mine environment treatment	FE	RLO	PNL
Surface mining	DOI		
Tar sands technology	FE	SFO/LETC	
Technology transfer	IA/CS		
Thermal pollution	EPA/EV		
Tidal power	CS/RA	SFO	
Transportation			
alternative fuels	CS	BETC	
energy conservation	CS		
Uranium			
analysis	EI		
contracting	RA		
demand	EI/RA	GJFO	
reserves	RA		
supply	RA		
Uranium-enriched marketing	RA		
Uranium land-leasing	RA		
Vehicles—			
efficiency	CS	NASALRC	
heat engines	CS	NASALRC	
waste heat utilization	CS		
Ventilating equipment	CS	SFO	LBNL
Waste energy	CS	IDO	INEL
Waste heat recovery	CS		
Waste oil recycling	CS		
Water—			
energy conservation	CS/EPA		
waste utilization	CS/EPA	IDO	INEL
Wave energy	CS	SFO	
Weatherization	CS	Regions	
Wind-small systems	CS		
Wind characteristics	CS	RLO/CORO	PNL/SERI
Wind energy conversion systems	CS		
Windows—			
energy efficient design	CS		
Wood combustion	CS		
Woodstoves	CS		
Waste disposal on ocean floor	EV	ALO/RLO	SANDI/ HEDL

Mission	Secretarial Office	Field Office	Laboratory
Waste Energy—glass furnace	CS	IDO	INEL
Waste management— community energy & urban	CS	CORO	ANL
Waste management, nuclear energy	NE	SRO/ORO/ RLO/IDO/ ALO	SRL/ORNL/ INEL/HEDL/ SANDIA
Weapons Activity	DP	ALO/SFO/ NVO	



Chapter VI

Special Programs for Certain Types of Business Organizations

Protection of Free Enterprise the National Economy and the Security of the Nation

The Small Business Act, enacted on July 18, 1958 (P.L. 85-536) declares that the economic well-being and the security of this nation depend upon the expansion of free competition which, in turn, requires that special aid, protection and assistance be given to small businesses.

Giving special consideration to small businesses is a national security and economic policy which has been reaffirmed by every President and every Congress since 1958.

Nearly every session of Congress clarified and/or extended the coverage of the law. For example, in 1961 Congress made explicit the fact that subcontracts of contractors doing business with the government were included in this policy and the coverge of the law. More recently in 1978, the Congress, in Public Law 95-507 made clear that small and small disadvantaged businesses receipt of assistance, in obtaining both prime and subcontracts, was a mandatory function of every federal agency and of that agency head.

In all instances these special considerations were (a) to preserve free competition; (b) necessary for the economic strength of the nation; and (c) declared essential to the national security.

The nature of these considerations is discussed below.

Small Business Program and Set-Asides

One of the methods provided by the law to assist small businesses involves special consideration for such firms through ''set-asides.'' In a ''set-aside'' arrangement, either the individual contract or entire classes of contracts (e.g. aerial surveys) are made available for competition solely between small business firms with subsequent award to the successful small business bidder. For example, a contract for security guard services may be set-aside and only small businesses may then compete for the award of the contract.

Small business set-asides are always advertised in the Commerce Business Daily (CBD).

Individual set-asides result from an examination of proposed contracts for goods and services and the selection of specific contracts for limitation to small businesses. This limitation may cover either all of the proposed award or simply a stated portion. If all of the proposed action is covered then it is called a ''total set-aside''. If the only portion is reserved for small business it is then termed a ''partial set-aside''.

Additionally, there are ''class set-asides.'' In these cases, the entire procurement ''class'', i.e. product or service sought, is automatically set-aside for small businesses. The Department of Energy has 163 such class categories. These are established independently by the var procurement offices and are reviewed e year under the guidance of the Office of Small and Disadvantaged Business.

A prime example of a DOE small business class set-aside, is the reservation of all construction in the range of $10,000 to $2 million.

Both DOE procurement offices and DOE GOCO's have the authority to engage in small business set-asides. These are advertised in the Commerce Business Daily (CBD) and priority is given to total set-asides over partial set-asides.

It should be stressed that the small business program extends far beyond set-asides. In fact it includes a variety of approaches to insure that small businesses are given preferential treatment. These are discussed in sections below.

For further information contact the DOE Office of Small and Disadvantaged Business Utilization.

Labor Surplus Area Set-Asides

The purpose of a Labor Surplus Area (LSA) Set Aside contract is to restrict competition in order to direct selected Federal procurements into sections of the country with substantial unemployment as required by the Small Business Act as amended by P.L. 95-89. Participating contractors must be located in, or agree to perform substantially in eligible Labor Surplus Areas and meet other solicitation criteria. Labor Surplus areas are identified in "Area Trends" issued by the Department of Labor annually.

The DOE must first decide if there is a reasonable expectation that bids or proposals can be obtained from a sufficient number of LSA eligible concerns so that contract awards may be made at a reasonable price. If this determination is made by DOE, the solicitation notice in the Commerce Business Daily will identify the kind of labor surplus set aside required as either:

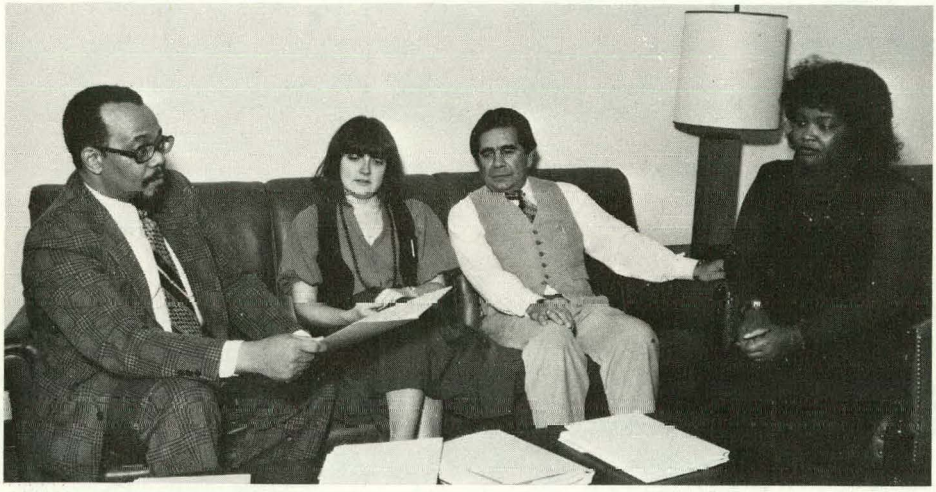
- Concerns which are located in labor surplus areas, and which are also small business concerns, on the basis of a total set aside;
- Concerns which are located in labor surplus areas on the basis of a total set-aside (no business size limitation).

The DOE is given a target goal annually by the General Services Administration for Labor Surplus Area set asides. The annual goal for FY 1980 is $206 million. DOE establishes internal goals for buying offices which assist in achieving this overall goal. Each business should determine if it is in fact in a labor surplus area by contacting the OSDBU.

Small Disadvantaged Businesses

Of course all small disadvantaged businesses receive the special considerations highlighted in discussing small businesses in general. They do, however, receive additional considerations under Public Law 95-507. These additional considerations include:

1. Being defined as a business category under the Small Business Act (as amended by PL 95-507) the business owned by a socially and economically disadvantaged person, is treated as a distinct category. For example, in subcontracts planning and goal setting they must be treated separately. The law defines disadvantaged as including minorities. (See 2)



John Shepard, Director, OSBDU, councils staff members.

2. The law provides that sole source contracts may be entered into with these firms under section 8 (a) of the Act. This process involves the DOE entering into a contract with a chosen firm by using the SBA as the prime contractor. For certified ''8(a)'' firms, the contracting process is more rapid.

The Section 8(a) of the Small Business Act and subsequent regulations defines [illegible] firms as being owned and operated by [illegible]ck Americans, Hispanic Americans, Native Americans, Asian Pacific Americans, and other minorities, or other individuals deemed to be socially and economically disadvantaged owners. The SBA makes the determination upon application and review of business plans and development. They issue ''8(a) certificates of eligibility'' whereupon the firm *may* become eligible for such contracts.

The Section 8(a) process involves identification of potential contracts by either the SBA or by DOE. Potential contractors are similarly identified often after reviewing the technical capability of several firms. Once the firm has been chosen (SBA and DOE seek agreement both by telephone and by letter) the negotiation may proceed. The DOE may negotiate with the firm on this matter but it must always be remembered that the actual prime contract is with the SBA. Therefore, any otherwise unresolvable difference may involve that agency as well. (Either DOE or the potential contractor may request their presence at the negotiations.)

It must also be noted that the 8(a) contractor must comply with most of the procurement regulations applying to prime contracts. This includes such items as Organizational Conflict of Interest, Patents etc. The SBA may assume the burden of some items if requested and if SBA deems it essential. Bonding charges represents one such item.

The Section 8(a) process was formalized in P.L. 95-507 as discussed below. The time for processing an 8(a) award is generally much shorter than that for any other federal contract. As in any contracting situation however the businessman cannot ignore the need to follow the process closely and provide speedy response to queries that are essential to all customer related activities.

Public Law 95-507

On October 24, 1978 the Small Business Act was amended in a fashion which inaugurated many contracting changes. As a result this amendment is frequently referred to (P.L. 95-507) rather than the Small Business Act. The major changes made in the Small Business Act by P.L. 95-507 include the following, many of which have been referred to above:

1. Establishing an Office of Small and Disadvantaged Business Utilization in each federal agency.

2. Provided that all contracts over $500,000 (or $1 million if public construction) must have subcontracting plans unless they were (a) 100% foreign; (b) small business; (c) had no anticipated subtract; or (d) are personal services. These

ontracting plans state goals and iods of achievement for both types of businesses.

3. Providing that each agency must set small and disadvantaged business goals for the total of all contracts and subcontracts over $10,000.

4. Providing that small purchases (under $10,000) must be reserved for small business except as noted above. This includes small disadvantaged businesses.

5. Providing firms ready access to all RFP's, IFB's, etc.

6. Providing renewed emphasis on set-asides, including Architect-Engineer services, and/or Research and Development.

7. Providing that sale of property to small business be directly considered a portion of the agencies role through the assistance of the Office of Small and Disadvantaged Business.

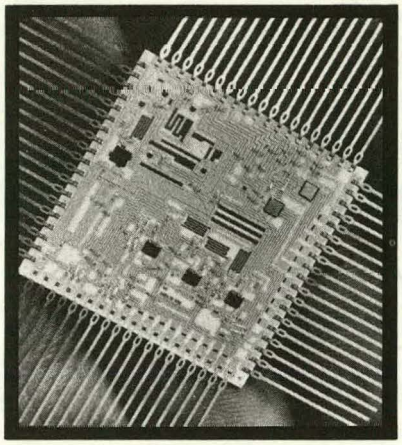
8. Providing for a greater SBA review and intervention in the goaling and contracting process.

These are by no means all of the changes effected by PL 95-507. In fact changes affect subcontracting through every tier where over $500,000 is involved.

Screening Process

The Department of Energy has established a screening procedure whereby every contract in excess of $10,000 is screened to assure that the procurement preferences contained in the Small Business Act as amended are in fact complied with. In addition, DOE headquarters has a Small Business Administration Procurement Center Representative (SBA/PCR) assigned full time to DOE who also screens every proposed procurement action. In the case of DOE field activities, a SB/DB Specialist screens their procurements in the same way as does the DOE headquarters. Some of the DOE field activities also have a SBA representative assigned to them on a liaison or part-time basis.

The small business person should establish wherever possible a knowledgeable relationship with the Office of Small and Disadvantaged Business Utilization (OSDBU). Both large and small businesses should develop a solid working knowledge of P.L. 95-507.



Chapter VII

Special Considerations

Patents, Data and Copyrights

Under DOE statutory patent policy, DOE normally reserves the right to title in all inventions conceived or first actually reduced to practice in the course of or under contracts, grants, or other agreements involving research, development or demonstration. In such instances, the contractor or assistance recipient is normally reserved a royalty-free, nonexclusive, revocable license for the use of such inventions. However, at or before contracting, a contractor or recipient is permitted to request an advance waiver of the Government's rights in inventions. Also, the contractor or recipient may request waiver of the Government's rights to identified inventions after the time of contracting.

DOE recognizes that a contractor, an assistance recipient or their employees may desire to publish, within the limits of security requirements, information regarding scientific or technical developments made or conceived in the course of their work under agreement with DOE. So that public disclosure of such information will not adversely affect the patent interest of DOE, the contractor, or the assistance recipient, the contract or grant provides DOE with a 60-day period in which to determine whether patent protection should be obtained prior to release of information.

DOE Procurement Regulations, Section 9, (Reference 6) and DOE Assistance Regulations (Reference 7) contain policies and detailed procedures on patents, data and copyrights.

Classified Research and Security Considerations

Classification

Most proposals for DOE projects are unclassified. If, however, during the evaluation of a proposal it is found that the work will be in or border on a classified topic, any resulting contractual arrangement will take this into account and the contractor or assistance recipient will be required to comply with applicable Government security regulations. Certain contractual provisions or assistance conditions can be included in an award instrument to allow for termination of the arrangement, should a classified topic develop during the course of work (Reference 6 and 7).

Security

Where possible, an unclassified proposal should be submitted. However, if this is not feasible, the proposal must be classified in accordance with its content. Additional guidance with regard to the preparation, handling and disposition of a classified proposal may be obtained from:

Office of Safeguards and Security
U.S. Department of Energy
Century XXI
Germantown, Maryland 20545

Reports

Recipients of financial assistance or procurement contract awards will be expected to satisfy reporting requirements stipulated in the solicitation, the award instrument, or applicable regulations. For additional information on procurement contract reporting, see DOE Uniform Contractor Reporting System Guidelines, Volume I (Reference 13).

The selection of appropriate reports, their frequency and the amount of detail will vary based on several factors including the program objectives, amount of funding and type of instrument awarded. DOE program managers have been instructed to use discretion in report selection in order to keep administrative burdens to a minimum.

Audits

Public laws authorizing DOE to issue contracts, grants and cooperative agreements provide authority to audit and examine the books and records of the recipients of contracts and financial assistance.

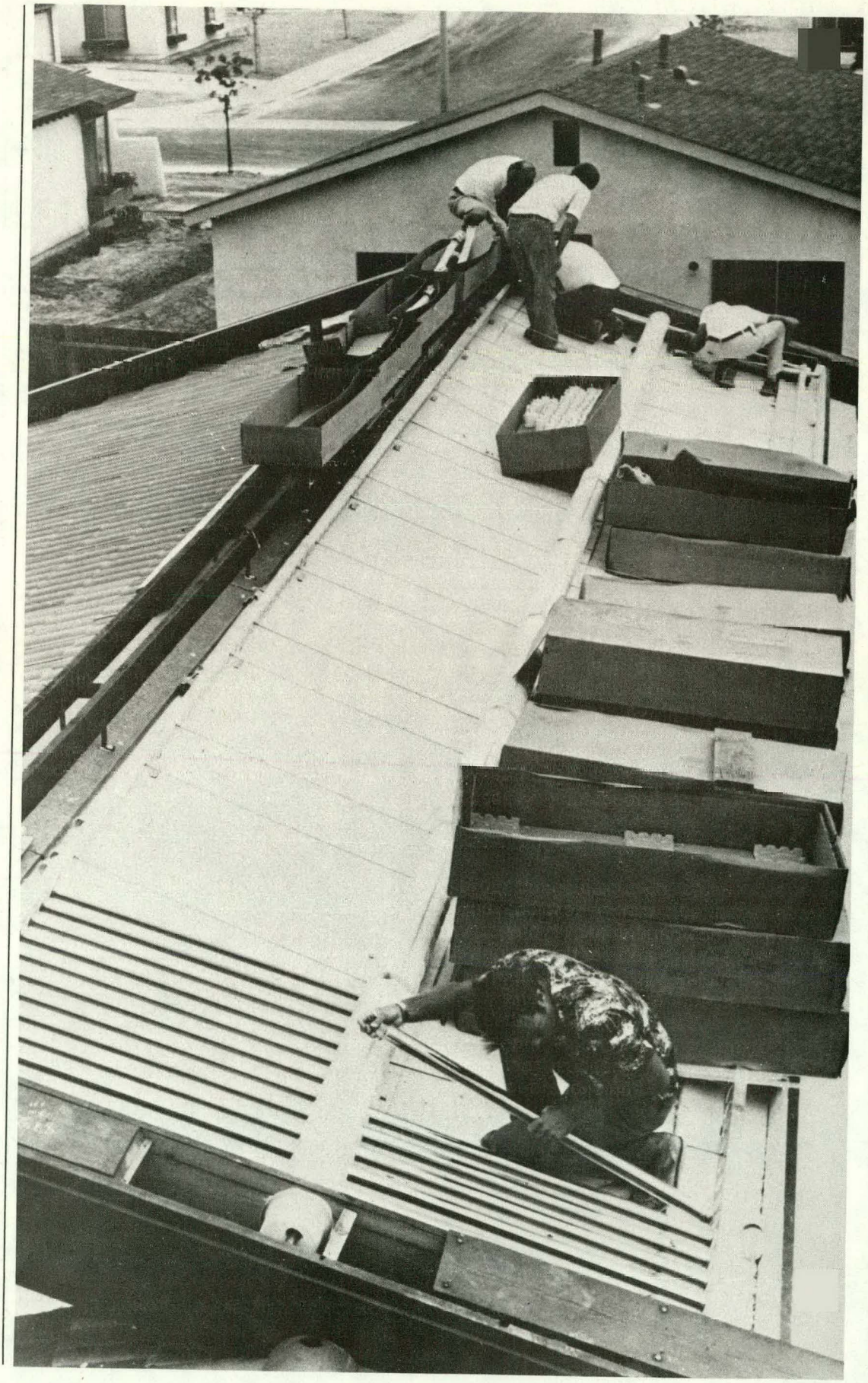
The issuance of overall DOE audit policy is the responsibility of the DOE Inspector General, with the Procurement and Contracts Management Directorate being responsible for the implementation of the various audit requirements as applicable to the award instruments.

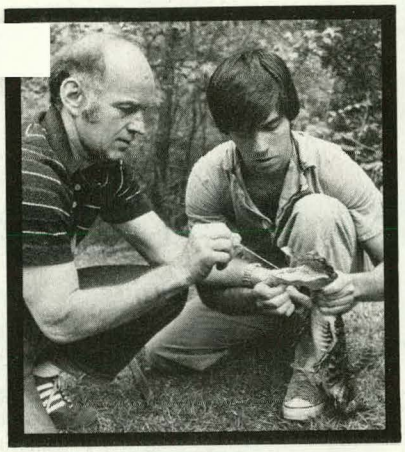
In addition, in accordance with his statutory responsibilities, the Inspector General conducts audits, inspections and investigations for the purposes of detecting fraud and abuse and promoting economy and efficiency in the Department's programs and operations.

DOE often employs the services of the Defense Contract Audit Agency and auditors of other Federal agencies to perform on-site contract audits. For certain types of financial assistance awards the recipient may be required to have audits performed by either an independent certified public accounting firm or by independent state or local auditors.

The objectives of audits are to determine whether agency management, accounting, procurement, and property control systems and procedures provide assurance to DOE that costs claimed are reasonable, allowable and can be allocated under the procurement and Federal assistance terms and conditions; and to review conditions and report any noncompliance with applicable procurement, Federal assistance and DOE regulations, and provide recommendations for improvement where needed.

Auditors will generally give advance notice prior to the start of an audit.





Chapter VIII

Major Program Offices of DOE

This chapter is devoted to a brief description of the major programs of the Department of Energy which provide substantial business opportunities. The major areas are:

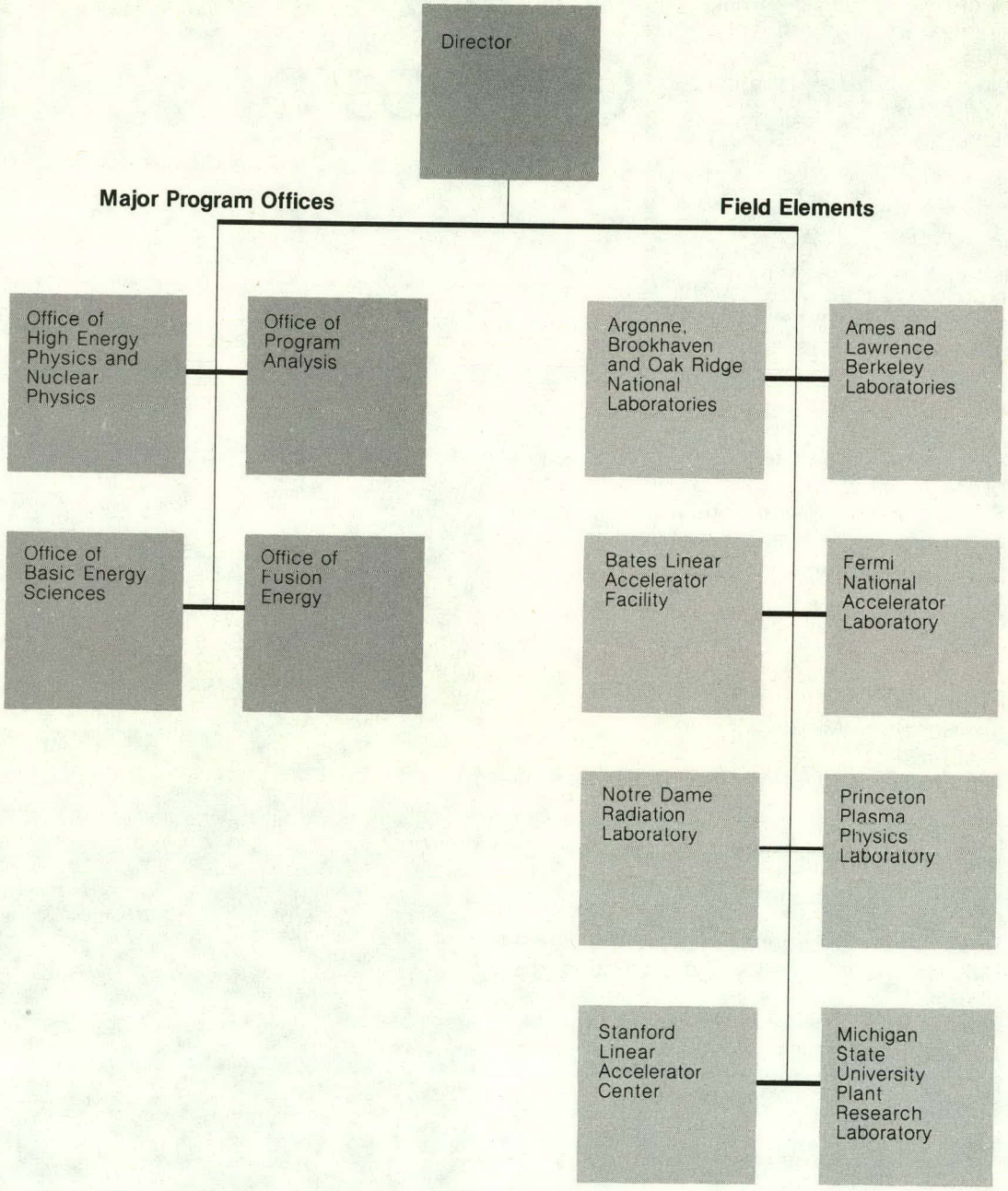
- Energy Research
- Environment
- Conservation and Solar Energy
- Resource Applications
- Fossil Energy
- Nuclear Energy
- Defense Programs

Descriptions of programs under the Assistant Secretary for Policy and Evaluation, the Energy Information Administration, the Office of Minority Economic Impact, and the Economic Regulatory Administration which provide additional business opportunities are also included.

Remember to make use of the Directory, inserted in this guide, to secure the names and addresses of contacts for specific programs in which you are interested.

A large weather balloon being launched by environmental scientists from Argonne National Laboratory.

Energy Research



ENERGY RESEARCH

General Description

The Director of Energy Research advises the Secretary on DOE physical research programs, the Department's overall energy research and development programs, university-based education and training activities. The Director also carries out additional duties assigned to the Office related to basic and advanced research, and monitors the well-being and management of the multiprogram laboratories under the jurisdiction of the Department.

Each Office of Energy Research major program is summarized on the following pages.

Field Elements

Five multiprogram and six single-purpose laboratories are administratively assigned to the Office of Energy Research. Each of the five multiprogram laboratories is briefly described later in this guide. The single-purpose or specialized laboratories are the Bates Linear Accelerator Facility at the Massachusetts Institute of Technology, the Fermi National Accelerator Laboratory, the Notre Dame Radiation Laboratory, the Princeton University Plasma Physics Laboratory, the Michigan State University Plant Research Laboratory and the Stanford Linear Accelerator Center. The multiprogram laboratories conduct significant research activities for other DOE programs (e.g., Environment) and other Federal agencies, while the six specialized laboratories are funded almost totally by the Office of Energy Research.

Office of High Energy and Nuclear Physics

High Energy Physics

The High Energy Physics Program in this office is a basic research program which develops high technology and new knowledge of great value to energy programs. Its primary motivation is to understand the fundamental nature of matter and energy and their transformations. DOE provides about 90% of the Federal support, with the National Science Foundation providing the remainder. Experimental and theoretical research teams at universities have enjoyed broad access to DOE services and facilities.

University research groups perform approximately 75% of the experiments scheduled at the three DOE high energy accelerators—Brookhaven National Laboratory, Fermi National Accelerator Laboratory, and Stanford Linear Accelerator Center. These Laboratories are managed by universities or consortia of universities. University research, whether experimental or theoretical, is usually jointly funded by DOE and the home institution.

Unsolicited Proposals from universities to DOE for research support are analyzed by the High Energy Physics Program staff and undergo external peer review. Independently, experimental research proposals are submitted to national accelerator laboratories for review by a laboratory program advisory committee consisting of a panel of university and laboratory experts. The final decision to make accelerator facilities available for a particular experiment rests with the laboratory and is based on the scientific merit of the research proposal. Successful research proposals for DOE support usually receive one-year contracts with provisions for review and renewal on an annual basis.

Program Objectives

- Identify the ultimate constituents and structure of matter and energy;
- Understand the basic forces in nature which govern all interactions of matter and energy;
- Seek and discover new physical phenomena using high energy subnuclear particle interactions;
- Maintain U.S. program in a world leadership position; and
- Be alert to opportunities for the transfer of new technology developments and breakthroughs, in high energy physics, to energy development programs.
- Long Range Planning for High Energy Physics.

A typical experiment in high energy physics requires 3 to 5 years from design of apparatus to publications of results while a new accelerator facility usually consumes 8 to 10 years from conception to first beam operation. In cooperation with the High Energy Physics Advisory Panel and the National Science Foundation, the DOE High Energy Physics Program frequently updates its long-term strategy for fulfilling the future needs of a strong and innovative research base.

Nuclear Physics

The Nuclear Physics Program of this Office is the major Federal research effort concerned with advanced experimental and theoretical studies of the interactions, structure, and other fundamental characteristics of nuclei. Its three major components are: Medium Energy Nuclear Physics, Heavy Ion Nuclear Physics, and Nuclear Theory.

Medium Energy and Heavy Ion Nuclear Physics are experimental efforts heavily dependent upon the existence and effective operation of major accelerator facilities.

Of these, five are operated as national facilities where beam time is made available to the Nation's scientists on the basis of scientific merit and technical feasibility of proposals submitted. The national facilities are: the Clinton P. Anderson Meson Physics Facility at the Los Alamos National Scientific Laboratory; the William H. Bates Linear Accelerator at Massachusetts Institute of Technology; the SuperHILAC at Lawrence Berkeley Laboratory; the Bevalac at Lawrence Berkeley Laboratory; and the double MP tandem van de Graff facility at Brookhaven National Laboratory. The new Holifield Heavy Ion Research Facility at Oak Ridge National Laboratory began operation in 1980 as a national facility. Each of the national facilities, as well as smaller accelerators at Washington, Yale University, and Lawrence Berkeley Laboratory, accomodates major university-based user group research programs. The DOE Nuclear Physics program is the major Federal supporter of university-based user groups in the field of nuclear research. The Nuclear Theory effort is closely related to the experimental work in that it provides guidance to a deeper and more unified understanding of nuclear phenomena, and it helps to interpret experimental results in terms of fundamental theory. Support of work under Nuclear Theory is almost equally divided between national laboratory-based theorists and university based theorists.

Program Objectives

- To describe quantitatively the structure of complex nuclei in terms of the fundamental interactions that occur among neutrons and protons;
- To use nuclei as a laboratory for the study of fundamental forces in nature;
- To develop phenomenological understandings in those cases where the nuclear system is too complex to be treated in terms of fundamental forces;
- To advance research capability by developing new facilities, improving beams available to existing facilities and equipping experimental areas with advanced instrumentation;
- To identify practical applications resulting from nuclear research studies and to transfer the results to the appropriate scientific discipline or technology; and
- To maintain a position of leadership in nuclear research for the United States.

Office of Basic Energy Sciences

The charter of the Office of Basic Energy Sciences, which in FY 1980 has a total budget of $230 million, is to conduct a program of basic research that has elements relevant to each of the Department's energy technology programs. The product of Basic Energy Sciences is knowledge, insight and information that is needed for the development of an optimized national energy system. The subject matter of the research relates, in general terms, to the supply of energy, its prudent use, and its environmental suitability.

The Basic Energy Sciences office assigns priorities to specific scientific areas, based on a judgment of their importance to the Department's mission. The detailed substance of the program, however, is determined by the selection of unsolicited proposals and ideas from the university/scientific community and from the staffs of the DOE laboratories. There are six subprograms:

- Nuclear Sciences
- Materials Sciences
- Chemical Sciences
- Engineering, Mathematical and Geosciences
- Biological Energy Research
- Advanced Energy Projects

Coverage by each sub-program is broad. For example, Chemical Sciences includes research in atomic and molecular physics, nearly all aspects of chemistry, chemical instrumentation, and some chemical engineering.

The steady state apparatus.

There are currently more than 1,100 research projects funded by Basic Energy Sciences. The following breakdown categorizes them from another point of view.

Energy Technology Relevance of Basic Energy Projects

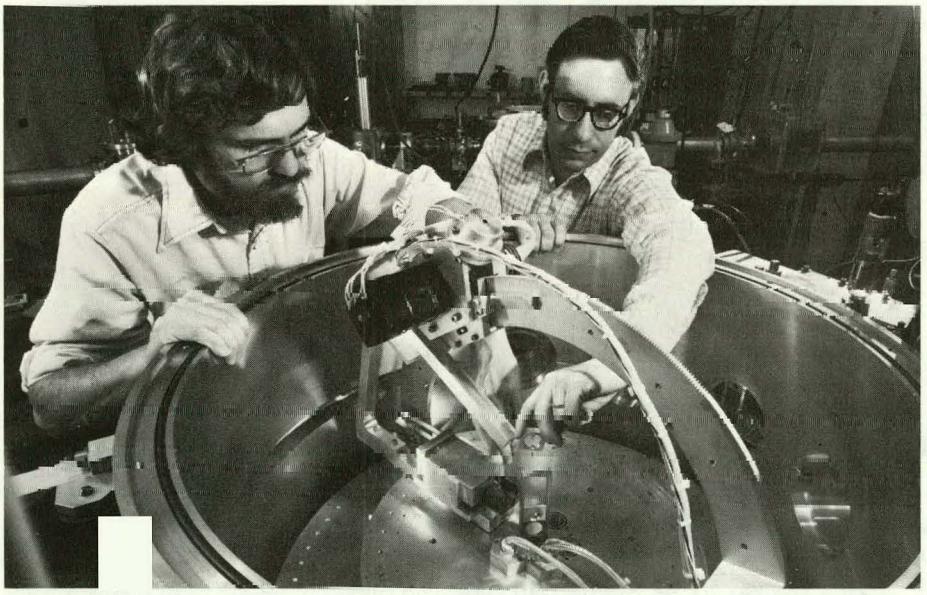
Energy Conservation
Fossil Energy
Solar Energy
Geothermal Energy
Fission Energy
Fusion Energy
Environment & Safety
Multi-technology
Long Term Advancement of Science

Basic Energy Unsolicited Proposals

The Unsolicited research proposals are first screened by program officials, and if appropriate, are evaluated by peer review. Successful proposers are usually awarded one-year grants, with the expectation that extensions for at least two additional yearly periods will be required, contingent on satisfactory performance. Most projects have a much longer life. Minimal technical reporting requirements are imposed basically those needed for decisions as to renewal or termination. A one-to two-year phaseout period is granted to those finishing research projects, in order to bring the work to an orderly conclusion and to support graduate students finishing their thesis research. All results must be published in the appropriate scientific and technical journals.

Office of Fusion Energy

The DOE fusion program consists of two activities—the unclassified magnetic fusion energy program, which is assigned to the Office of Energy Research, and discussed here, and the partially classified laser fusion program cited under Defense Programs.



30" scattering chamber for outside users at the Super Hilac.

The primary goal of the magnetic fusion program is to develop the technology for safe, economic and environmentally acceptable use of fusion power for the generation of electricity. A secondary goal is to develop and evaluate other applications of the fusion process including the production of fissile material, synthetic fuels and industrial process heat. To achieve these goals, the program has established several objectives which are:

Program Objectives

- To develop, through definitive experimental tests of key physics questions a strong scientific base necessary for the design of a fusion engineering test facility;
- To select; test and provide an assessment of alternate fusion concepts that
- To complete construction and initiate operation of major physics scaling experiments including the Tokamak Fusion Test Reactor and the Mirror Fusion Test Facility;

  could potentially lead to more economical and commercially practical fusion reactor systems;
- To provide the base engineering and technology developments needed to support the operation of current and next generation plasma experiments;
- To complete reactor studies of the most promising confinement concepts in order to provide a focus for the physics and technology programs; and
- To establish a strong technology base in materials, reactor components and systems which will permit an evaluation of various approaches to fusion on the basis of technology requirements, economic objectives and environment/safety constraints.

Problem Areas Requiring Additional Research

- Physics of plasma heating and confinement;
- Plasma diagnostics;
- Atomic physics of plasma impurities; and
- Improved superconducting materials.

Potential Areas for New Research Initiatives

- New fusion concepts; and
- Plasma-surface interactions.

Technical Assessment Projects of this e provide for rigorous assessment of existing or proposed technological initiatives in the Department, and for examination of the base of research that underlies a broad range of energy technologies. The program also provides independent technical advice to the Secretary on the conduct of DOE research and development programs, in order to help make them more efficient. Recent assessment studies undertaken included a critical evaluation of research needs in support of coal liquefaction, an evaluation of research and development programs in support of the ocean thermal electric systems, battery storage, advanced isotope separation technologies, and applications of robotic technology to nuclear system maintenance.

Problem Areas Requiring Additional Research

- Evaluation of chemistry of physics of coal; and
- Study of long-range research needs in coal oil shales.

Potential Areas for New Research Initiatives

- Carbon dioxide effects forecasting;
- Space-to-ground microwave transmission phenomena;
- Unconventional gas resource evaluation; and
- Novel approaches to liquid fuels from biomass and fuels for transportation

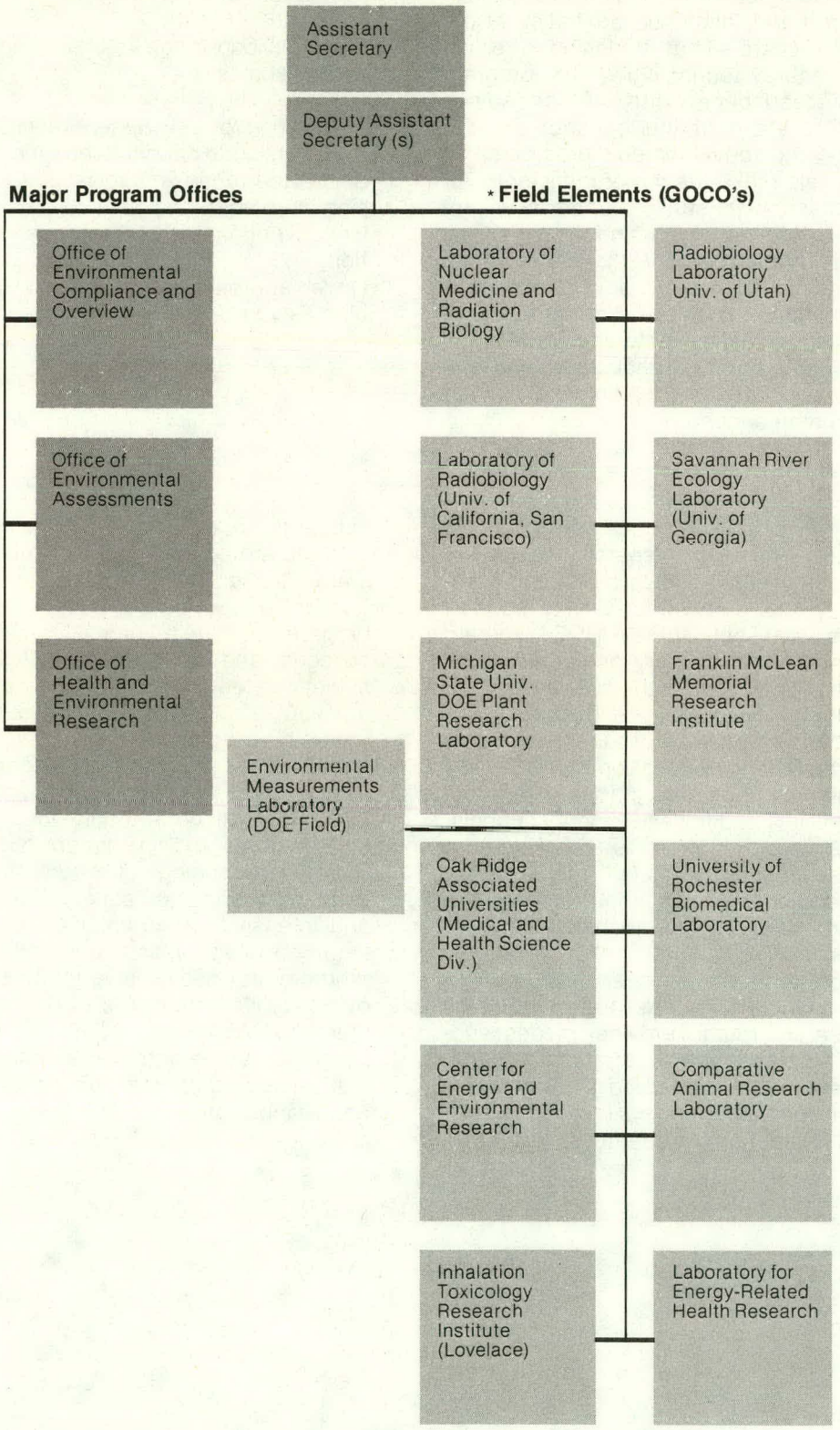
Office of Program Analysis

Additional Efforts

In addition to providing substantial support for specific university research efforts, the Office of Energy Research administers several special-purpose university support programs that cut across DOE program areas and the disciplinary or departmental structures of universities themselves:

- The Minority Institutions Research and Education program support energy research and education projects by faculty members and graduate students at smaller, traditionally minority schools. In 1980, eleven projects are being supported totaling $650,000. In addition, 200 minority high school students are being supported in research apprenticeships at various DOE National Laboratories and in universities.
- The University Institution Energy Research Program provides modest support for seed-type exploratory research projects, workshops and seminars at a small number of universities with significant institutional strength in and commitments to energy. During 1980, six projects are being supported in this program totaling $1.8 million.
- The University Reactor Fuel Assistance Program provides financial support to colleges and universities to maintain nuclear research and training reactors. In 1980, $1.7 million will be obligated under this program.
- The University Laboratory-Cooperative Program includes a variety of activities that bring college and university faculty and students to DOE laboratories and Energy Technology Centers to participate in ongoing research programs and intensive instructional sessions on energy-related topics. During 1980, this program provides $2.8 million to support over 1,000 students and faculty members. Additional information on this program may be obtained by contacting staff members at participating DOE national laboratories.

Environment



*Direct Oversight of These Field Elements Is Through the Respective Operations Offices

ENVIRONMENT

General Description

Assistant Secretary for Environment (EV) serves as the independent voice within the Department of Energy (DOE) to ensure the incorporation of national environmental protection goals in the formulation and implementation of energy programs, and to advance the goals of restoring, protecting and enhancing environmental quality, and assuring public health and safety. EV accomplishes its mission through three basic programs: compliance and overview, policy analysis and impact assessment, and health and environmental research. These programs are planned and implemented so as to maximize the degree of cooperation and coordination between EV units.

There are two staff offices (Office of Program Coordination and Office of Management Support) and three program offices (Environmental Compliance and Overview; Environmental Assessments; and Health and Environmental Research) within EV.

Office of Environmental Compliance and Overview

The Office of Environmental Compliance and Overview (OECO) assures that Departmental facilities and operations are in compliance with DOE operational policies and applicable Federal, state, and local environmental, health and safety regulations and policies. OECO develops DOE National Energy Policy Act guidance, conducts independent reviews of departmental Environmental Impact Statements (EIS) and reviews EIS's of other agencies. It ensures that DOE-controlled activities do not pose undue risks to workers, the general public, property and the environment. OECO develops policies and procedures for implementing the compliance programs, coordinates with programs within the department, and monitors all departmental installations and contractors for compliance. The office promotes adequate environmental, health and safety practices and assessments throughout the department by maintaining current awareness of the state-of-the-art and distributing such information to departmental programs and contractors. OECO evaluates the technical adequacy of environmental control technologies being developed for DOE energy systems. Advanced safety engineering practices and tests are evaluated and developed by OECO.

Office of Environmental Assessment

The Office of Environmental Assessment (OEA) acts as a focal point for analysis of the impact of environmental policies, laws and regulations of significant interest to the department; analyzes and coordinates the development of departmental environmental policy guidance; and analyzes EV policies. The office estimates environmental regulatory impacts on DOE programs; and in cooperation with technology program offices, prepares Environmental Development Plans which analyze critical environmental issues and provide information for scheduling appropriate environmental, health, and safety research and analyses for individual energy technology systems and subsystems. OEA also develops, maintains and applies regional environmental, land use, and social impact analysis procedures to assess DOE policies and maintains and develops energy-related environmental information systems.

Office of Health and Environmental Research

The Office of Health and Environmental Research (OHER) plans, manages, and assesses the results of the EV research program directed at determining the generic environmental, health and safety effects of energy technologies and programs. The office performs assessments of the results of health and environmental effects research, [illegible]oving methods for epidemiological [illegible]ysis and control of health and environmental data. OHER investigates the effects of energy-related pollutants on human health, including consequences to exposure, develops diagnostic methods and improves occupational medicine. OHER determines effects of energy-related pollutants on biological systems, developing mitigative and preventive measures, and identifying mutagenic, carcinogenic, and toxic agents. OHER determines effects of energy-related pollutants on ecological systems, investigating terrestrial, fresh water and marine biota, restoration and reclamation, and global impact of carbon dioxide from increased use of fossil fuels. OHER characterizes properties and im-

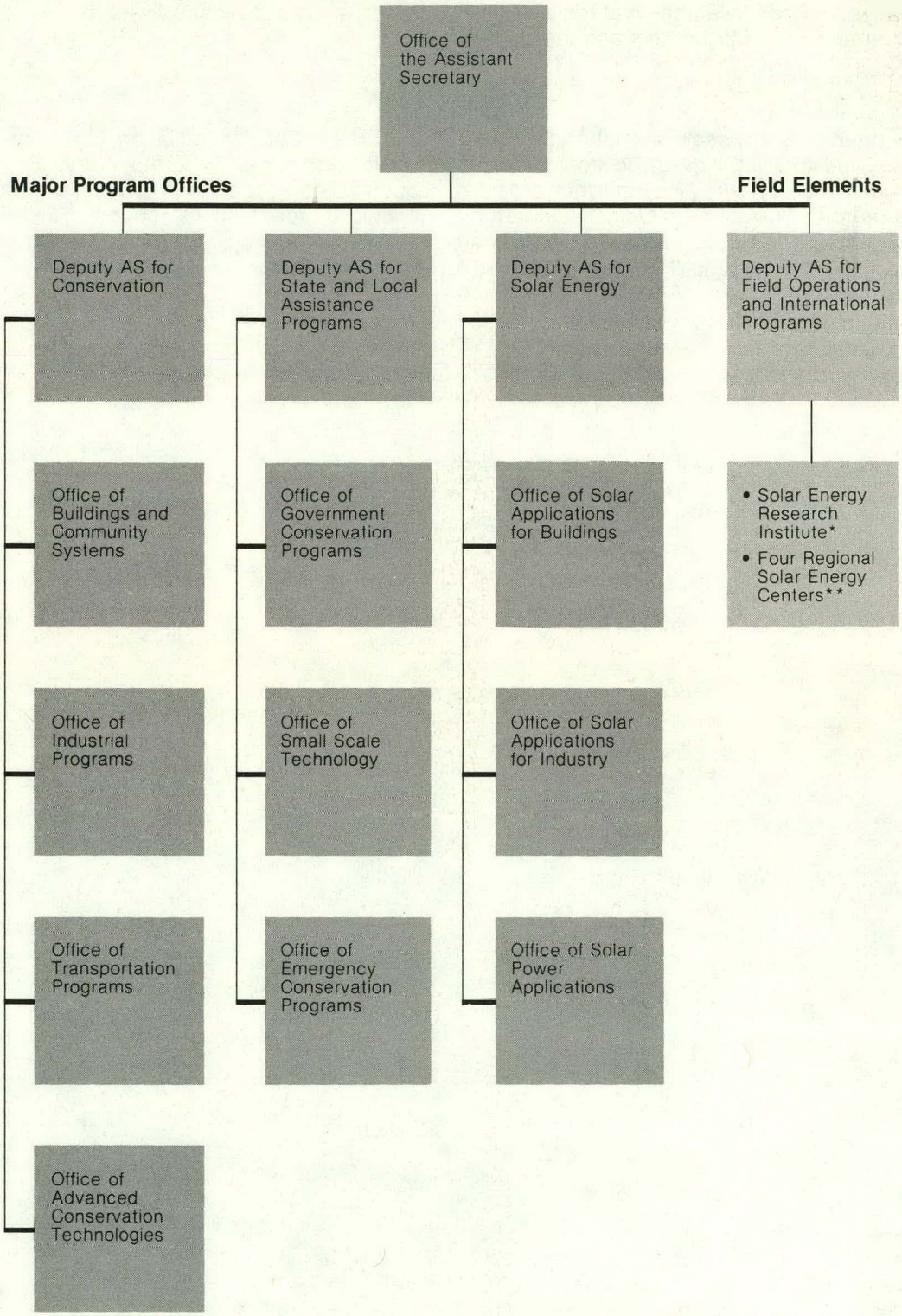
The Department of Energy is developing a low-cost, portable isotopic device to monitor auto exhausts for three major pollutants: carbon monoxide, unburnt hydrocarbons and oxides nitrogen.

proves measurement methods for energy-ed pollutants, developing instruments and standard research materials. OHER determines risks to workers and the general public from energy systems, studying the safety aspects of resource recovery, energy processes, and disposal of wastes.

Field Elements

Thirteen program dedicated laboratories are assigned to the Office of Environment (see organization chart). Also, the multiprogram laboratories (Argonne National Laboratory, Brookhaven National Laboratory, Lawrence Berkeley Laboratory, Lawrence Livermore Laboratory, Los Alamos Scientific Laboratory, Oak Ridge National Laboratory, Pacific Northwest Laboratory and Sandia Laboratories) accomplish research for EV. Other EV research is accomplished by universities, Energy Technology Centers, and contractors.

Conservation and Solar Energy



*Operated by Contractor (GOCO) and Administered by Chicago Operations Office.

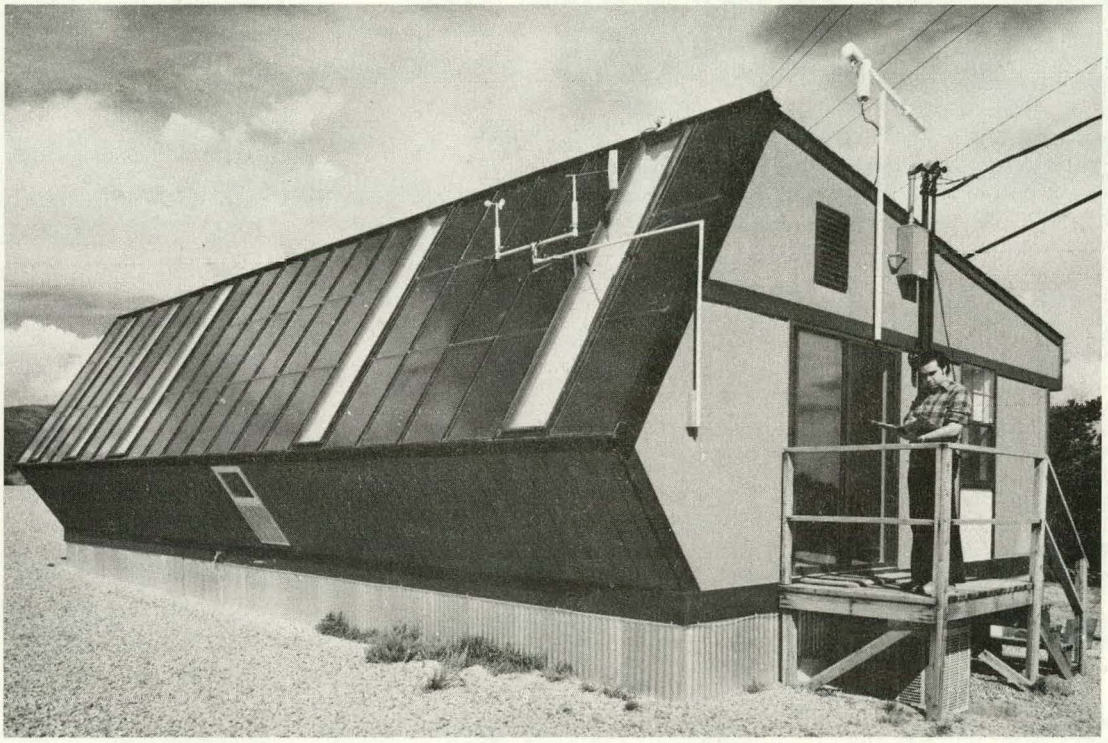
** Two of Four Centers Operated by Contractor.

CONSERVATION AND SOLAR ENERGY

The Assistant Secretary for Conservation and Solar Energy is charged with a dual responsibility to urge efficient use of the Nation's energy supplies and to encourage the widespread use of solar energy. The primary objective of this organization is to moderate the Nation's growing demand for petroleum-based energy. Conservation and Solar programs cover a broad spectrum of energy users: from research, development and demonstration of advanced technologies, to financial and technical assistance for conservation-related activities, to support for regulatory programs and technology transfer activities.

To achieve its mission, various Conservation and Solar Energy programs simultaneously stimulate the development and application of improved energy-efficient technology, and speed the introduction of programs, entailing higher risks and more potential for conservation than otherwise would be feasible, into the private sector. They also provide necessary research, development and demonstration to develop and commercialize renewable energy systems. Other programs enable selected public and private energy users, such as schools, hospitals and low-income persons to institute energy conservation improvements which would not be undertaken without Federal assistance.

General Description



Exterior view of the laboratory under construction.

Field Elements

Solar Energy Research Institute, Golden, Colorado

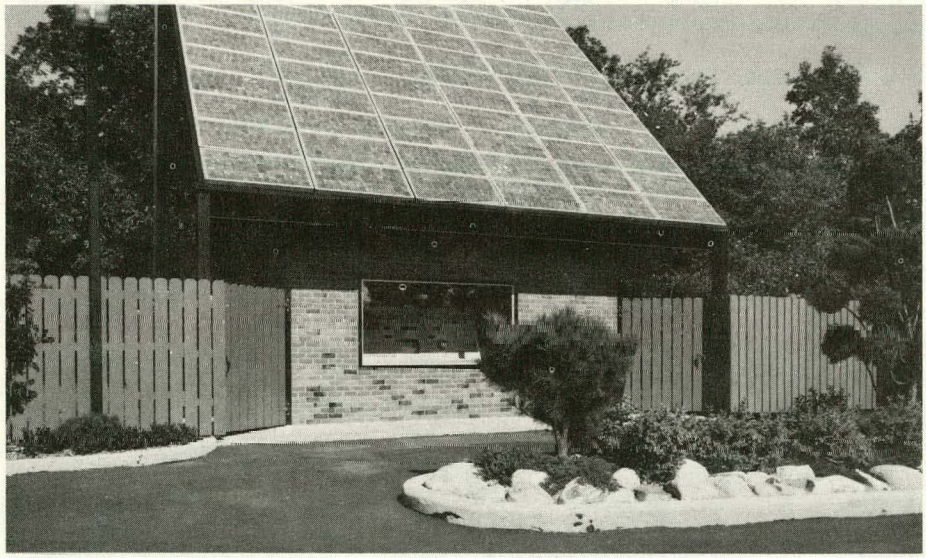
The Solar Energy Research Institute began operations in July 1977. Its mission is to serve as the primary DOE institution for solar energy research, development and demonstration. The Institute's programs are designed to ensure the development of solar energy technologies to the point where they a :apable of making significant, reliable c ibutions to the Nation's energy supply. Activities include program and project management; market analysis of solar technology; solar information dissemination; and the design and development of a Solar Information Data Bank. The Institute also supports research by universities and other organizations with funds provided by DOE headquarters.

Regional Solar Energy Centers

The four Regional Solar Energy Centers were established to promote widespread solar energy utilization on a regionally diversified basis. The four centers, representing the Northeast, Mid-America, Western and Southern regions of the United State[illegible]e located respectively in Cambridge, Massachusetts; Eagan, Minnesota; Portland, Oregon; and Atlanta, Georgia.

Office of Buildings and Community Systems

The Office of Buildings and Community Systems supports activities designed to increase energy utilization efficiency in commercial, residential and Federal buildings and in entire communities through use of integrated community energy systems. Its programs employ research, development and demonstration and other approaches to encourage the adoption of energy conservation and fuel substitution technologies. Vital to this endeavor are efforts to increase the use of urban waste as a source of energy, increase the energy efficiency of consumer products, and transfer energy-efficient technology to the private sector. Overall, the program will lead to increased energy efficiency in new and existing buildings by accelerating the use of new energy-efficient technologies in the construction and operation of buildings and building systems. To accomplish its goals, the Office of Buildings and Community Systems works closely with local governments, other Federal agencies, the construction industry and other elements of the private sector.

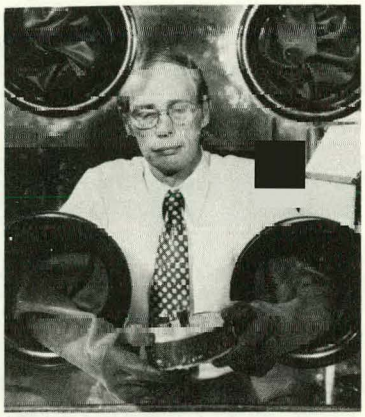


In carrying out these objectives it also promotes commercialization in building system components, space heating and air conditioning. Further, it promotes commercialization of biological and combustion systems converting municipal wastes into fuels.

Office of Industrial Programs

The Office of Industrial Programs seeks to identify energy conserving industrial techniques and to sponsor cost-shared research, development and demonstration projects to develop and transfer this technology to the private sector. The programs are aimed at increasing energy utilization efficiency, substituting more abundant fuels for scarce oil and natural gas in the industrial and agricultural sectors, and minimizing energy loss in waste streams of all types. To complement these efforts, programs are maintained to monitor industry's progress toward improved energy efficiency and to transfer existing and new technology to the private sector. The industrial programs encourages an increase in the rate of adoption of energy conservation measures and investments by the industrial sector and seek to accelerate the introduction of higher-risk technologies which offer significant energy conservation potential. Among the activities of the Office are:

- Identification and analysis of existing but inadequately utilized industrial energy conservation technologies and implements appropriate Federal action.
- Stimulating implementation by private industry of new and existing technologies. These include market analysis, product-specific commercialization plans and implementation, industrial information dissemination and assistance.
- Operating an Industrial Reporting Program to monitor progress of energy conservation within the most energy intensive industries.
- Actions mandated by the National Energy Act including establishing targets for utilization of recovered materials in four industries, studies of thermodynamics and the feasibi[illegible] of equipment standards, and definiti[illegible] of equipment performance for additional tax credits.



Dr. Paul Nelson, Argonne National Laboratory, holds the newly developed lithium/ sulfur battery developed by Argonne engineers. An enclosure called a "glove box" filled with an inert atmosphere to prevent oxidation is used to assemble and test the cells.

The 60 kw Darrieus wind turbine at the test site at Sandia Laboratories.

Office of Transportation Programs

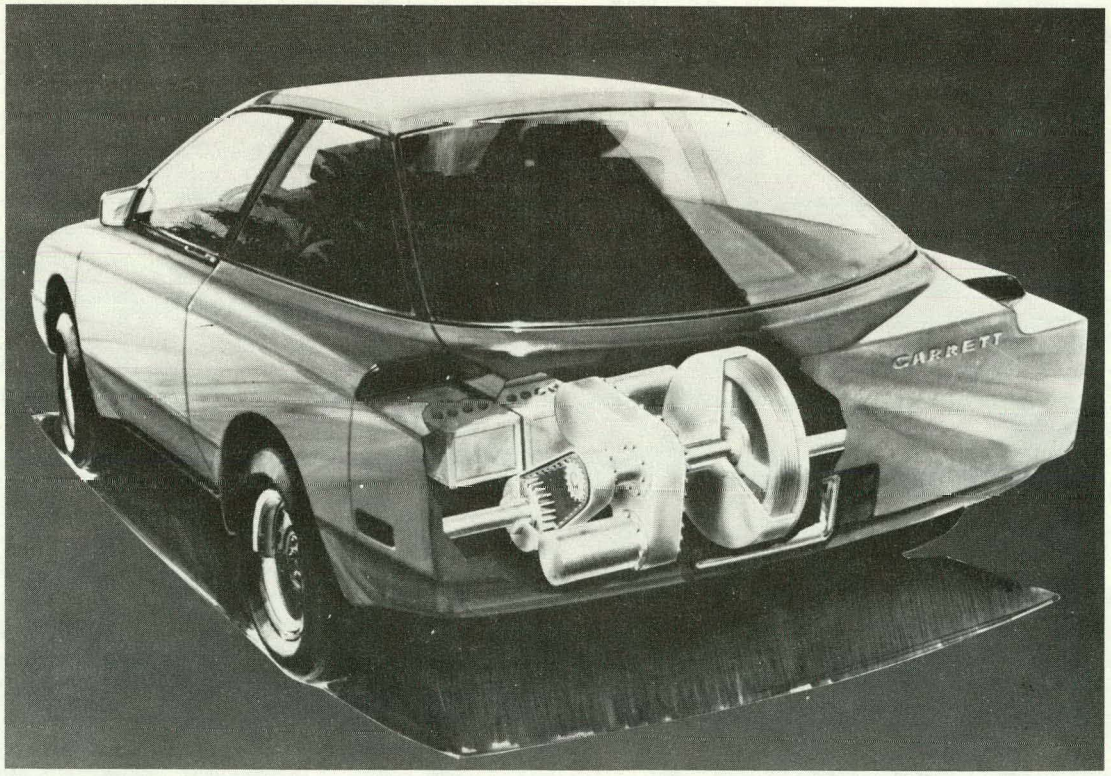
The Office of Transportation Programs are aimed at reducing the total energy consumed by vehicles by encouraging research to develop advanced energy efficient propulsion systems for trucks, buses and automobiles, with emphasis on the passenger automobile. High priority is given to the development and commercialization of the gas turbine, Stirling engines, and electric hybrid vehicles; emphasis is also placed on the development of alternate fuels. Other segments of this program augment the longer-range research, development and demonstration effort by encouraging the adoption of already available energy-efficient technologies and by instituting incentives that encourage people to buy energy-efficient automobiles. In addition, driver education programs inform people about energy-efficient driving practices.

Office of Advanced Conservation Technologies

The Office of Advanced Conservation Technologies is responsible for developing and demonstrating, (in joint efforts with end-use oriented offices) reliable, cost effective, environmentally acceptable energy storage systems. The Office conducts a program in battery storage technology to improve performance and reduce costs of batteries for vehicular and stationary applications. It seeks to have reliable, efficient and inexpensive thermal and mechanical energy storage technologies developed.

The Office is further responsible for advanced concept development activities to improve productivity and fuel-switching capabilities of energy conversion systems through research in generic technology areas including tribology, the study of friction. It carries out research programs in such basis areas as heat transfer, thermodynamics, combustion and tribology.

Heat loss survey



Electric test cars. This car features a "flywheel" for better acceleration.

Office of Government Conservation Programs

The Office of Government Conservation Programs manages programs of financial and technical assistance to state and local governments and institutions including (1) the basic and supplemental State Energy Conservation Programs, (2) the Weatherization Assistance Programs, (3) the Schools and Hospitals Programs, and (4) the Local Government and Public Care Buildings Program. The office provides data and forecasting systems necessary to measure energy savings attributable to the programs and monitors program progress and effectiveness, conducting actual on-site visits to gather program data.

Th ffice Conducts extensive interagency co nation with other Federal agencies, the Congress, the State and Local government entities. It is responsible for policy and program guidance for conservation programs implemented on a regional basis.

Office of Small Scale Technology

The Office of Small Scale Technology conducts the Appropriate Technology Small Grants Program, a financial assistance program to fund the development of innovative energy conservation technologies and methods of utilizing community-level renewable energy resources. Individuals, small businesses, State and Local governments, Indian tribes and nonprofit organizations are eligible to participate in the program, which awards development and demonstration grants of up to $50,000. The program is managed through the ten DOE regional offices (see Directory) which are responsive to local needs and concerns.

Solar Energy Concentrator, a solar energy collector capable of concentrating the rays of the sun ten times is undergoing testing.

The program awards grants to encourage the utilization of energy sources of a smaller, less capital-intensive scale that lend themselves to local applications. The Office manages the issuance of grants in the energy related inventions programs. This program assists inventors in the development of their energy related inventions that are referred to DOE by the National Bureau of Standards.

Office of Emergency Conservation

The Office of Emergency Conservation implements the Emergency Energy Conservation Act by developing and managing programs designed to deal with severe energy supply interruptions. In accordance with the Emergency Energy Conservation Act, it establishes national and state energy conservation targets to be implemented during energy emergencies, and approves state emergency conservation plans.

Office of Solar Applications for Buildings

The Office of Solar Applications for Buildings is responsible for market research, testing and development activities for solar and renewable energy systems for application in residential and commercial buildings. It also manages the Federal Government's major purchasing programs in the area of solar applications including the Solar in Federal Buildings Program and the Federal Photovoltaic Program.

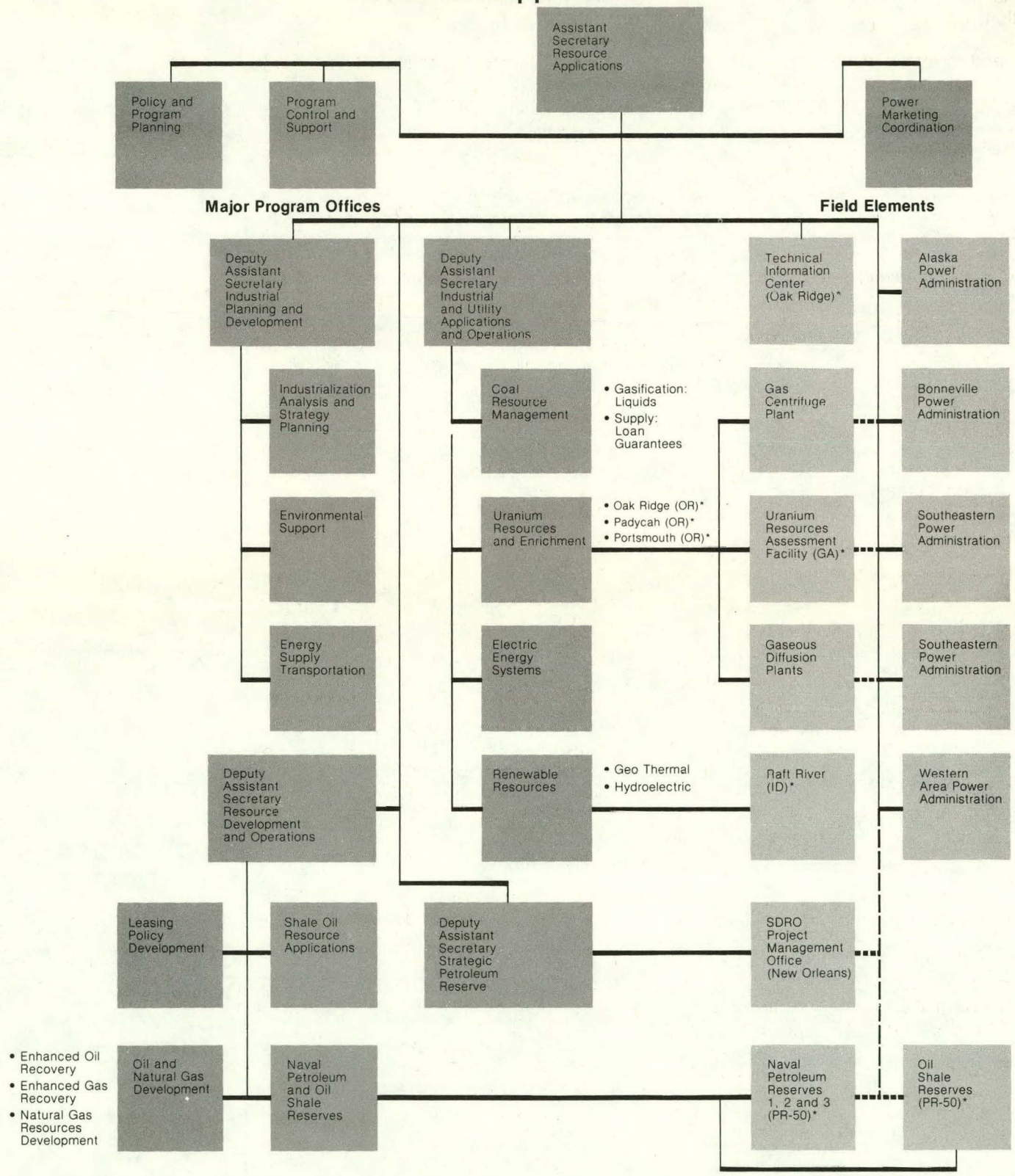
Office of Solar Applications for Industry

The Office of Solar Applications for Industry is responsible for market analysis, testing and development activities related to the application of solar and renewable energy systems in the industrial sector. It manages research and development programs in the areas of solar thermal systems and biomass energy systems. Biomass energy includes direct combustion and conversion of biomass into gaseous, liquid and/or solid fuels.

Office of Solar Power Applications

The Office of Solar Power Applications is responsible for market analysis, research demonstration programs related to central station power systems including ocean thermal electric systems and large wind energy conversion systems. Programs related to dispersed electric power generating systems such as small wind energy conversion systems are also included. The Office coordinates efforts with other solar energy offices related to the use of biomass energy and the use of photovoltaics in the utility sector.

Resource Applications



RESOURCE APPLICATIONS

General Description

The Assistant Secretary for Resource Applications implements national energy policy via three major missions. The first is to expand and diversify domestic energy supplies. This is achieved by providing marketplace alternatives to imported oil to provide a more secure source of domestic energy supplies. Methods in this area include promoting the production and use of synfuels and gas from coal and shale, expanding hydroelectric and geothermal energy sources, increasing the production and productivity of primary sources such as oil and gas, improving the efficiency of our electric energy system and providing technical information in these and related energy areas.

The second mission is to expand federally owned and impacted energy supplies. This is accomplished through the management of energy production and distribution facilities such as the Naval Petroleum Reserves, uranium enrichment plants and Power Marketing Administrations. Additionally, RA acts to influence federal policies on the leasing of Federal lands for energy production, evaluates the extent of potential supplies of uranium and assesses the potential resources for geothermal and hydropower energy.

The third major mission is to provide for emergency energy supplies for the U.S. and, if necessary, our allies in order to reduce our vulnerability to supply interruptions. The management and operation of the Strategic Petroleum Reserve is intended to achieve this mission.

Program management and operations are carried out through four Deputy Assistant Secretaries, five Power Marketing Administrators, (with coordination by the Director of Power Marketing Coordination), and the Director of the Technical Information Center.

Resource Development and Operations

The Deputy Assistant Secretary for Resource Development and Operations manages those programs which produce or enhance private sector production of oil and gas. These are:

- Office of Naval Petroleum and Oil Shale Reserves which manages current production from the reserves and their development and preparation for future production;
- Office of Oil and Natural Gas Development which works to maintain the current level of production of domestic oil and natural gas through new technology implementation, economic incentives and permitting support;
- Office of Shale Oil Resource Applications which works to significantly expand the production of oil from oil shale resources;
- Office of Leasing Policy Development which promulgates policies for the leasing of federal lands for energy production and determines the production goals for energy resources on Federal lands.

Industrial and Utility Applications and Operations

The Deputy Assistant Secretary for Industrial and Utility Applications and Operations manages programs aimed at providing, improving or modifying energy sources used by industries and utilities. The offices are:

- Coal Resource Management which works to increase and improve the direct use of coal and coal synthetics in lieu of oil and gas;
- Uranium Resources and Enrichment which provides enriched uranium for industrial, utility and defense uses and evaluates the supply of uranium;
- Renewable Resources which works to significantly expand the availability and use of hydropower and geothermal energy sources;
- Electric Energy Systems which works to help assure the adequacy, reliability and efficiency of the domestic electrical energy system.

Industrial Planning and Development

The Deputy Assistant Secretary for Industrial Planning and Development conducts the strategic planning, analysis and evaluation of industrialization efforts and manages specific new industrialization initiatives. Upon creation of the Energy Security Corporation, this office is intended to become the primary DOE interface with the ESC. Offices are:

- Industrialization Analysis and Strategy Planning which works to ensure effective, comprehensive program planning for the industrialization of technologies and resources to provide diversified domestic energy sources and mar s specific initiatives in this regard;
- Environmental Support which helps assure the environmental soundness of energy industries and provides technical assistance in environmental matters to program offices;
- Energy Supply Transportation which analyzes the transportation capabilities necessary to develop new energy industries and provides technical assistance and a DOE focal point for energy supply transportation matters.

Strategic Petroleum Reserve

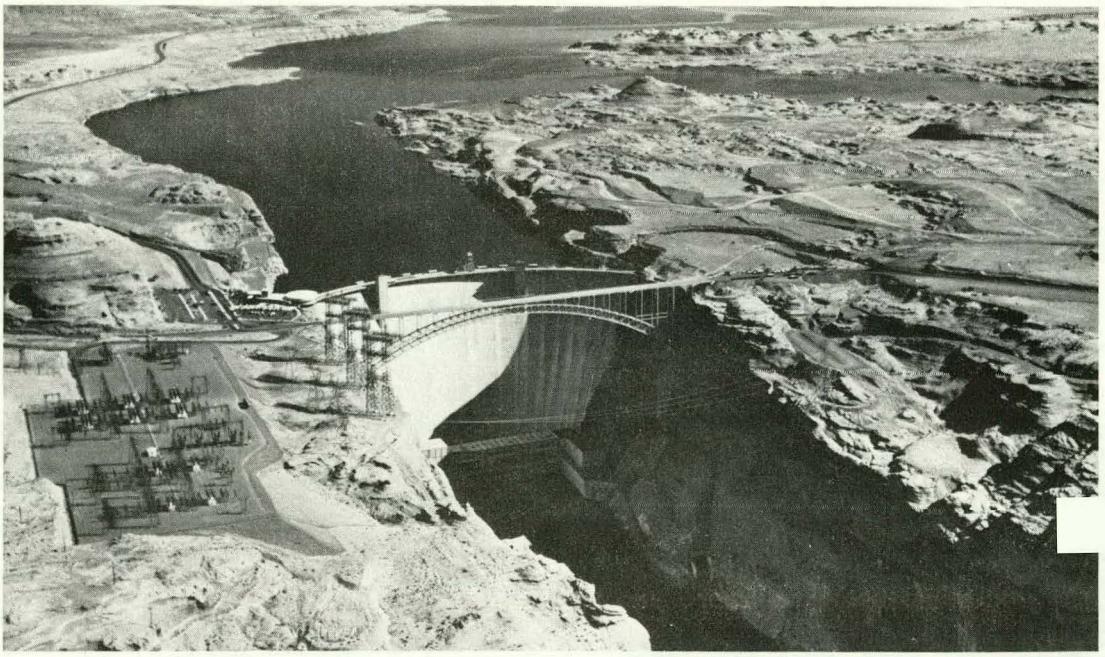
The Deputy Assistant Secretary for Strategic Petroleum Reserve manages the planning, development and operation of a crude oil and petroleum product storage and distribution system. This system is intended to reduce the vulnerability of the United States and our allies to supply interruptions. The SPR program includes the strategic reserve, its management, security and the acquisition of crude oil and petroleum products for storage as part of America's emergency energy supply system.

Power Marketing Administrations

The five Power Marketing Administrators manage the allocation, sale and transmission of electric energy produced by federal hydroelectric facilities within the respective administrations' geographic area. Each power marketing administration is a separate and distinct organizational entity within RA. The Assistant Secretary provides overall direction to the administrators to assure conformance to national energy policies. The Director, Office of Power Marketing Coordination assists the Assistant Secretary by coordinating the various activities common to the five power marketing administrations and provides staff support to the Assistant Secretary for power marketing matters.

The power marketing administrations are:

- Alaska Power Administration
- Bonneville Power Administration
- Southeastern Power Administration
- Southwestern Power Administration
- Western Area Power Administration



Aerial view looking upstream toward the Wahweap embayment — Wahweap marina located at upper center.

Keeping the pipeline growing is the job of these welders. Almost one million miles of unseen pipelines are currently serving the natural gas energy needs of America.

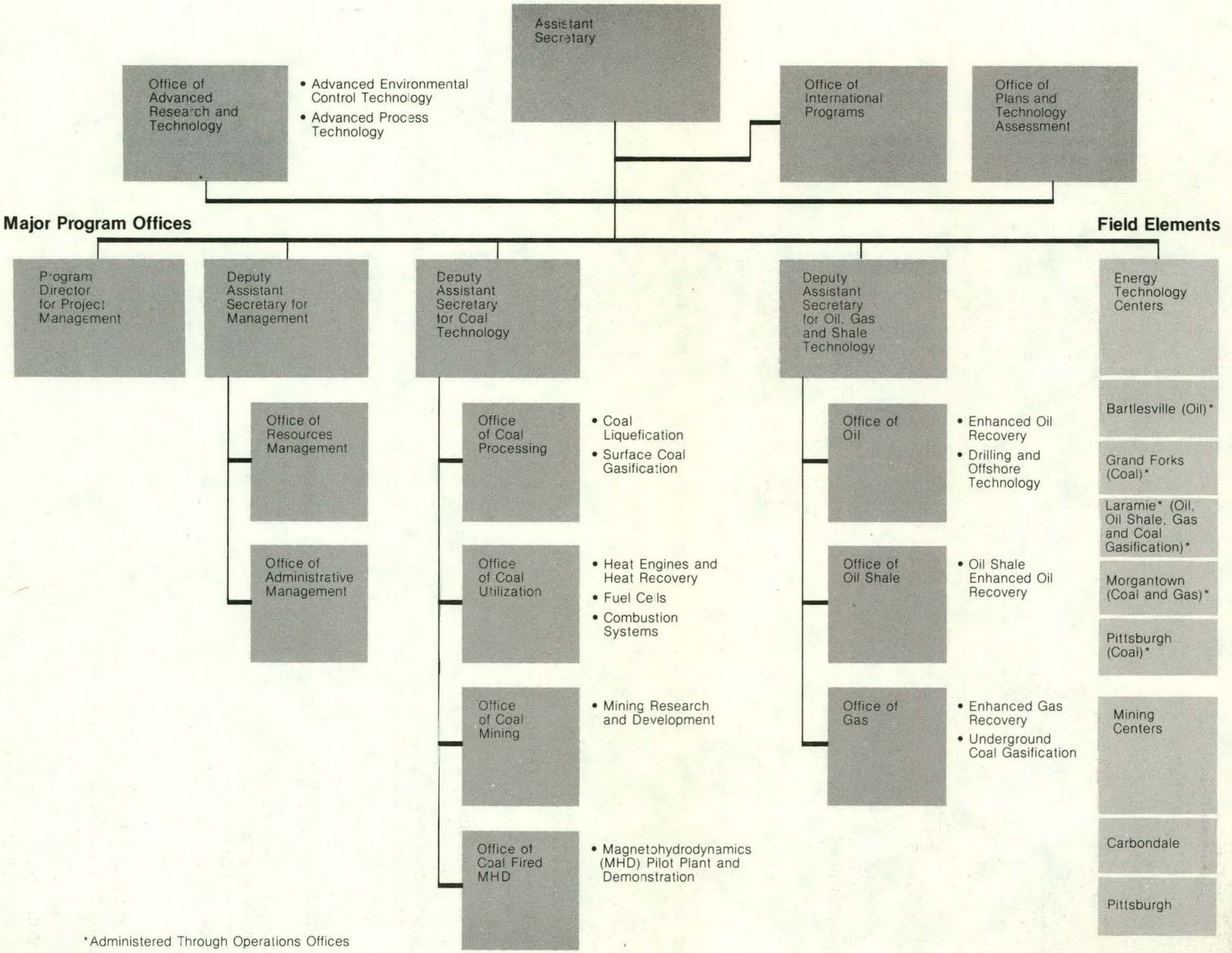
Technical Information Center

The Technical Information Center (TIC) is the central DOE collection, processing and dissemination activity for energy-related scientific and technical information. TIC assures that DOE-sponsored research is reported and distributed effectively. It also provides a bibliographic data base for the world's energy-related scientific literature. The Director of Scientific and Technical Information provides liaison with TIC and advises and represents the Assistant Secretary on matters regarding energy-related scientific and technical information.

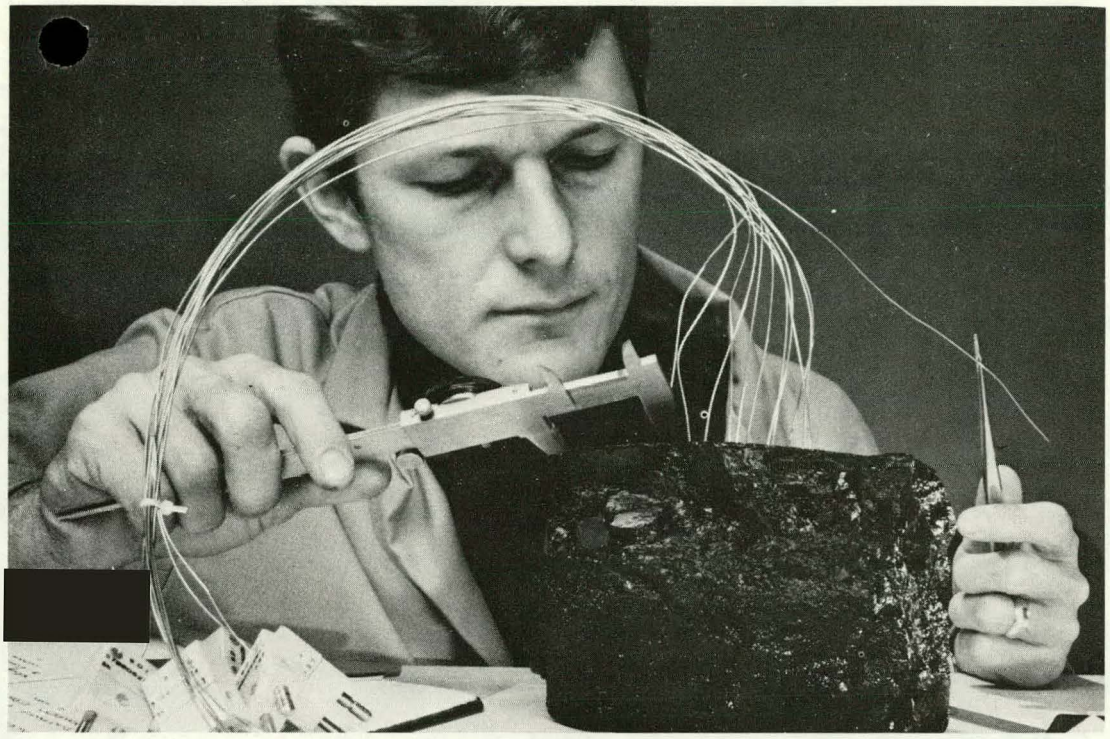
The Assistant Secretary is also assisted in the administration of RA programs and resources by two staff offices:

- Policy and Program Planning which manages the RA program planning systems and conducts analyses for policy decision-making,
- Program Control and Support which manages budget formulation, budget and program execution, and provides administrative support.

Fossil Energy



*Administered Through Operations Offices



A block of coal being prepared for a pyrolysis experiment.

FOSSIL ENERGY

General Description

The mission of the Fossil Energy Program is to develop technologies that will increase domestic production of oil and gas or that will permit the Nation to shift from oil or gas to more abundant coal. Specifically, the Fossil Energy role is to develop technologies to support the following objectives:

- Provide a capability to convert coal to clean liquid and gaseous fuels;
- Increase domestic production and utilization of coal, oil and gas and oil from oil shale
- Assure that current and new facilities burn coal in an economically viable and environmentally acceptable manner; and
- Allow more efficient and more economically attractive utilization of fossil energy resources.

The Fossil Energy activity includes fourteen major programs, which are grouped under seven program offices and discussed in the following pages.

Project execution and technical monitoring are administered in five energy technology centers and the two mining technology centers. These centers are described in the field operations section. Lead missions assignments in Fossil Energy are as follows:

Low/Medium Fuel Gas Demonstration Plants	Chicago Operations Office (CORO)
Solvent Refined Coal Demonstration Plants I & II	Oak Ridge Operations Office (ORO)
Magnetohydro-dynamics	Idaho Operations Office (IDO)
Engineering Test Facility	Chicago Operations (Support) (CORO)
High-BTU Pipeline Gas Demonstration Plants	Headquarters (PR-50)
Oil and Oil Shale Projects	San Francisco (SFO) Operations Office
Structural Materials Technology	Oak Ridge National Lab (ORNL)

Office of Coal Utilization

The activities of this office emphasize furthering the development of technologies that will allow greater coal use in the near term; these are flue gas cleanup systems, coal-oil mixtures and atmospheric fluidized bed combustion. In addition, research and development is supported on advanced coal utilization technologies, such as fuel cells, combined-cycle gasification, pressurized fluidized bed combustion, cogeneration, combustion of synthetic liquids, and novel combustion processes.

Areas Covered by Current Projects include:

- *Technology Development*
  - — Integrated coal gasification and combustion systems; open-cycle and closed-cycle electrical generation systems;
  - — Heat recovery components and systems, to include low-grade (up to 200°F) and high-grade (above 200°F) heat recovery and heat exchanger technology;
  - — Atmospheric and fluidized bed combustion systems;
  - — Engine combustion, and improved gas and oil burners; and
  - — Alternative fuel utilization, including coal-oil mixtures.
- *Research*
  - — Fluidized-bed combustion;
  - — Synfuel combustion;
  - — Pulverized coal combustion;
  - — Heat exchanger technology;
  - — Coal/oil slurry development and combustion;
  - — Advanced flue gas desulfurization;
  - — Thermal transfer in power conversion systems;
  - — Fuel cell oxygen electrodes;
  - — Fluid dynamics in coal combustion systems;
  - — Hot gas cleanup;
  - — Solid waste utilization;
  - — Environmental studies; and
  - — Development of combustion diagnostics.

Office of Coal Processing

The Coal Processing program consists of two main activities—coal liquefaction and gasification. The objectives of coal liquefaction are to develop, to the point of commercialization; a) Existing technology to convert domestic coal into clean boiler fuel, distillate heating oil, gasoline, and chemical feedstocks; b) Novel processes in bench scale units.

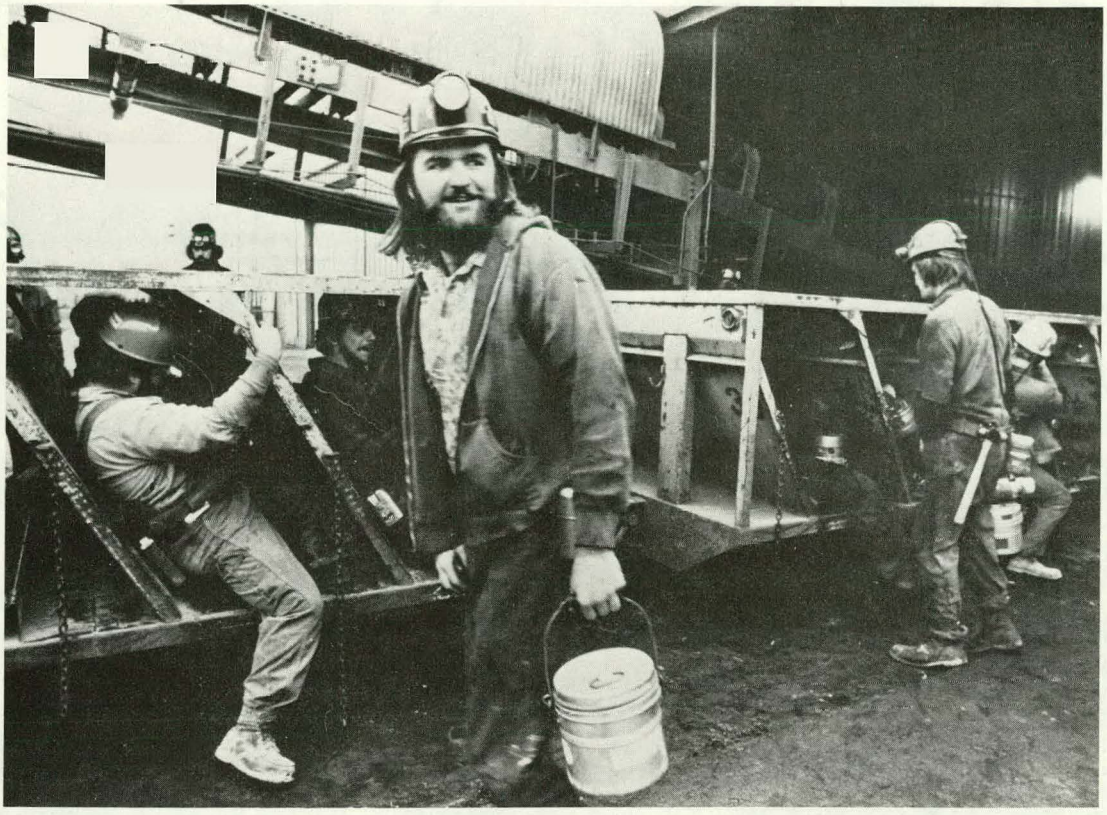
The overall objective of the gasification activity is to develop and demonstrate, in cooperation with industry, environmentally acceptable technology needed to gasify coal. The produced fuel gases of low/medium-Btu heating value can be used directly for chemical feedstocks or in coal liquefaction processes. High-Btu gas of pipeline quality can be used to supplement U.S. natural gas supplies.

Current Projects include:

- Technology Development on a) Coal liquefaction processes, e.g., solvent-refined coal, donor solvent process and indirect liquefaction; residue treatment processes; b) High-Btu and low-Btu coal gasification processes, hydrogasification and catalytic gasification; and c) Industrial coal gasifiers.
- Research on Liquefaction
  - — Extraction, through Hydroextraction/desulfurization process
  - — Exploratory evaluation of catalysts and hydroliquefaction investigation of slurry catalyst
  - — Pyrolysis and indirect liquefaction i.e. Flash hydrocracking/dilute phase hydrogenation and Indirect liquefaction from synthesis gas;
  - — Refining and Chemicals exploratory processes and refining of coal derived synthetic crude oils.
- Research on Gasification
  - — Advanced gasification processes for high-Btu gas including a) Catalytic gasification; b) Catalytic methanation; c) Rapid rate hydrogasification
  - — Advanced gasification processes for low- and intermediate-Btu gas and hydrogen

Office of Coal Fired Magnetohydrodynamics

The objective of the Magnetohydrodynamics (MHD) program is to facilitate the commercialization of MHD electric power plants through the design, construction, and operation of a commercial prototype MHD power plant and Engineering Test Facility. This objective entails three specific goals for mature, coal-burning utility-sized MHD steam plants: (1) achieve overall coal-to-busbar energy conversion efficiencies in the 50 percent range; (2) meet all existing or proposed Federal standards for sulfur dioxide, nitrogen oxides, and particulate emissions with reduced thermal pollution; and (3) achieve a cost of electricity lower n potential alternative power systems.



Deep coal mining near Marissa, Illinois.

Office of Coal Mining

The main objective of the mining program is to develop the improved technologies required to supply solid fuels at acceptable economic and social costs. The activities under this program are aimed at improving systems technology; developing cost-effective equipment and techniques; developing and demonstrating new and innovative mining concepts; and developing economically competitive preparation technologies. These objectives will be met by exploring new systems for underground coal mining, surface coal mining, and coal preparation.

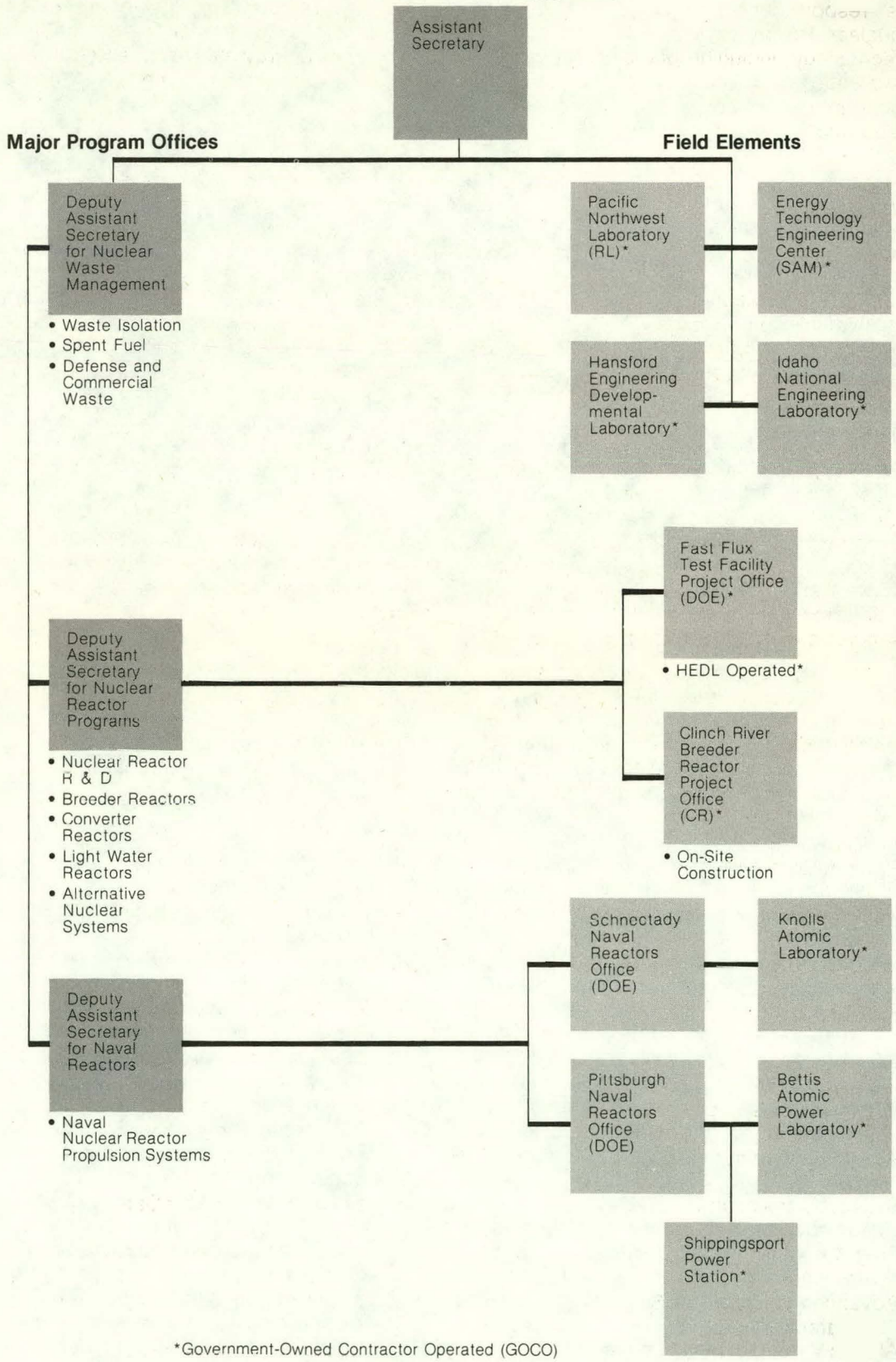
Office of Oil and the Office of Oil Shale

The main objective of the Oil program is to encourage and support industry participation in demonstrating mature technologies to enhance the production rate and recovery of original oil-in-place, to encourage development and testing of more efficient processes, and to accelerate and implement offshore oil and gas drilling and production technology in U.S. Outer Continental Shelf areas. The program is supplemented by oil shale and tar sands activities to increase domestic oil and gas production from these resources.

Areas covered by Current Projects include:

- Technology Development
  - — Enchanced oil recovery by micellar polymer flooding, carbon dioxide flooding, thermal processes, and advanced or novel concepts;
  - — Drilling technology using downhole telemetry, electrodrill, and deep drilling simulation;
  - — Offshore technology
  - — True and modified in situ retorting of oil shale.
- Research
  - — Process and basic studies on enhanced oil recovery by using carbon dioxide flooding, micellar polymer flooding, thermal methods, microbiological processes, and other novel processes;
  - — Environmental studies related to enhanced oil recovery and drilling, and offshore technology;
  - — Product characterization and utilization of oil, gas, synthetic fuels, and unconventional energy sources;
  - — Characterization of oil product from shales and tar sands;
  - — Engineering and basic studies on oil recovery from shale and tar sands;
  - — Shale retorting by unconventional and novel processes; and
  - — Shale oil refining and utilization.

Nuclear Energy



*Government-Owned Contractor Operated (GOCO)

NUCLEAR ENERGY

General Description

Th sistant Secretary for Nuclear Energy is responsible for the administration of nuclear fission power generation and fuel technology, including breeder reactors; the evaluation of alternative reactor fuel cycle concepts, including nonproliferation considerations; development of space nuclear generator systems; development of naval nuclear propulsion plants and reactor cores; and nuclear waste management. Much of the Nuclear Energy effort is directed toward technology and engineering development programs.

Office of Naval Reactors

The Office of Naval Reactors is responsible for the conduct of research and development of naval nuclear propulsion plants and reactors. Operation of prototypes is included in this mission. Activities are carried out through the two field offices (Pittsburgh and Schnectady) which administer contracts (GOCO) operating the DOE field facilities. Westinghouse operates Bettis Atomic Laboratory; General Electric operates Knolls Atomic Laboratory; and Dusquene Electric Co. operated the Shippingport power plant. Most if not all buying is done by these contractors, on behalf of DOE and GOCO's.

Office of Nuclear Reactor Programs

The Office of Nuclear Reactors Programs is responsible for the management of the nuclear fission power generators and fuel technology, including breeder reactors, the evaluation of alternative reactor fuel concepts and the development of space nuclear generator systems. In addition this office supervises the advanced isotope separation and the advanced nuclear systems programs.

Because of the scope of the effort much of it is assigned to field elements using the lead mission concept. Assignments are as shown in Table VIII-1.

Table VIII-1 Nuclear Reactor Programs Lead Missions and Contractors

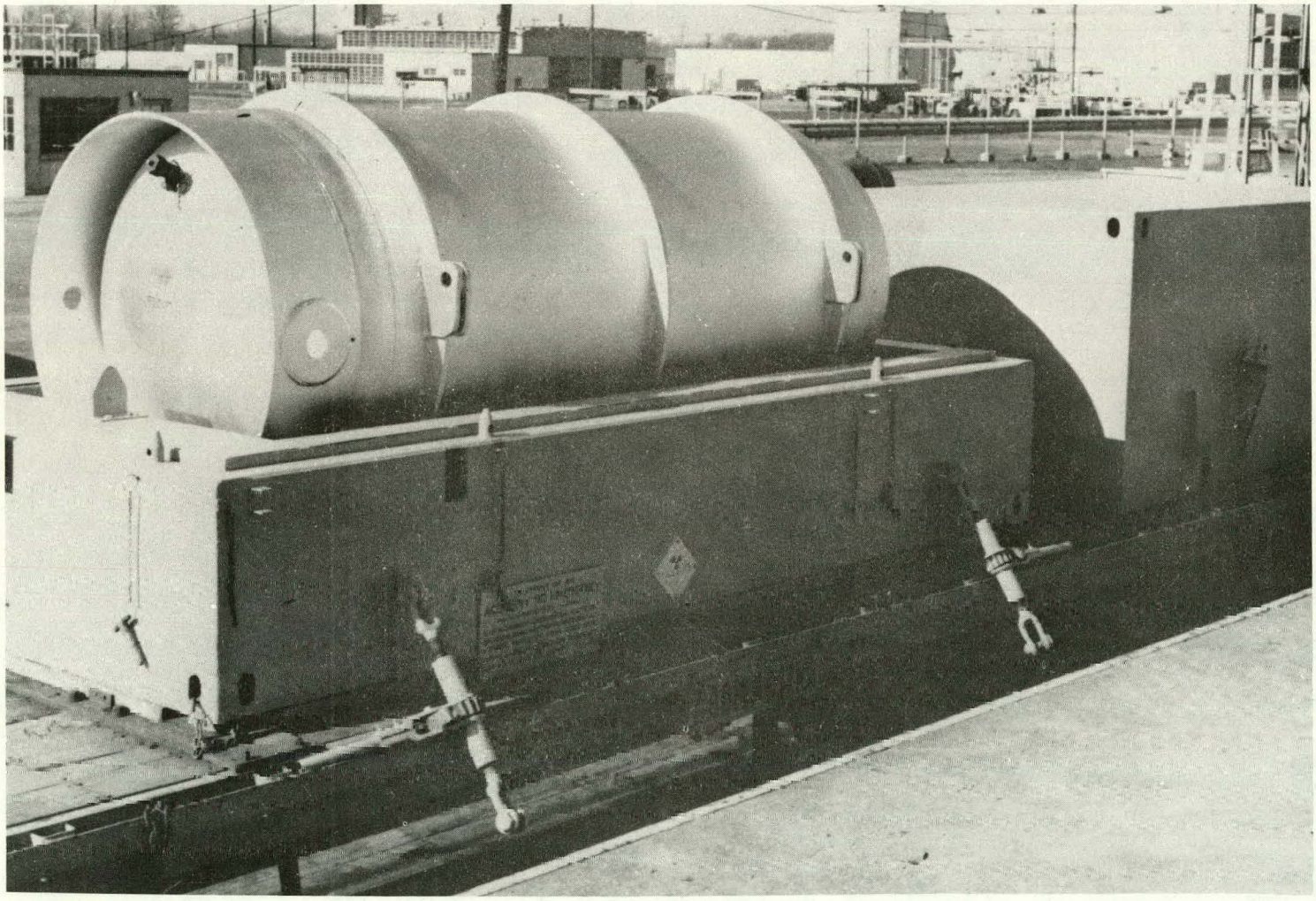
Assignment	Operations Office*	Project Office*	Laboratory*	Contractor
Clinch River Breeder Reactor Plant		CRBR	(Under Construction)	
Breeder Component Test	SFO		ETEC	Rockwell
Fast Breeder Components	CORO		ANL	University of Chicago
Fast Breeder Reactor Safety	CORO		ANL	University of Chicago
Fuel Storage Facility		FFTF	HEDL	Westinghouse
Fast Flux Text Facility		FFTF	HEDL	Westinghouse
Fuels and Materials Examination	RLO		HEDL	Westinghouse
Advanced Breeder Fuels		FFTF	HEDL	Westinghouse
Structural Materials Dev.	ORO		ORNL	Union Carbide
Fuel Recycling-reprocessing	ORO		ORNL	Union Carbide
Advanced Isotope aration	SFO/ALO		LLNL/LANSL	University of Calif.
A : Vapor Laser	SFO		LLNL	University of Calif.
Molecular Laser	ALO		LANSL	University of Calif.

*Refer to Chapter V, Table 2 for abbreviation codes.

Office of Nuclear Waste Management

Most of these lead missions involve construction and all involve potential markets for a broad range of products, skills and services. For contractors or offices specified in the lead mission please see the Directory accompanying this manual. For o' in- formation contact the headquarters c...ce in Washington, D.C.

The office of Nuclear Waste Management provides direction for both commercial (civilian) and defense waste processing. It also provides for spent fuel storage and transfer, transportation of waste, and decommissioning, decontamination of nuclear facilities. Much of this activity is conducted through lead mission assignments as shown in Table VIII-2.



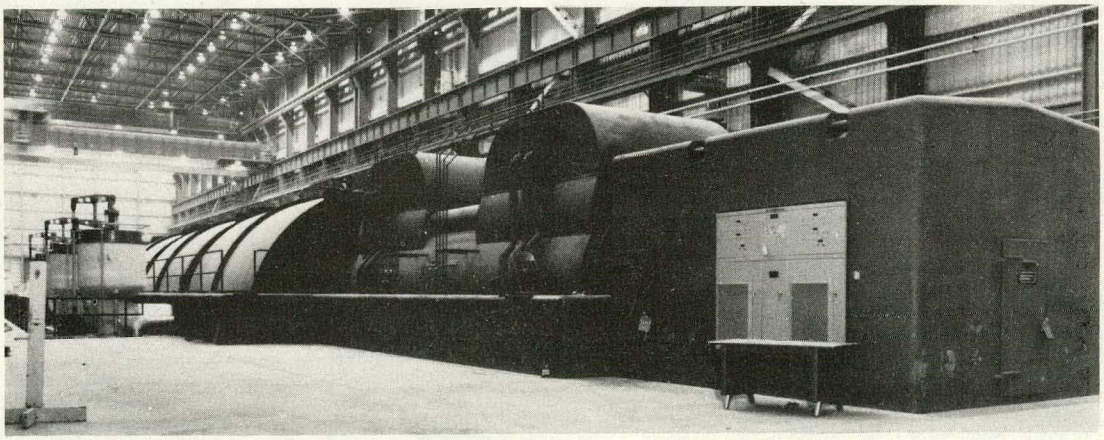
Safe transportation by "Paducah Tiger"

Table VIII-2 Nuclear Waste Management
Lead Missions and Contractors

Assignment	Operations Office	Laboratory	Contractor
National Waste Terminal Storage	RLO	HEDL	
Decontamination and Decommissioning	RLO/ IDO	HEDL/ INEL	
Plant	ALO	Waste Isolation Pilot	Westinghouse/Bechtel
Air Borne Waste	IDO	INEL	EG & G
Low Level Waste	IDO	INEL	EG &G
Interim Waste Operations	SRO	SRL	Dupont
Intermediate Waste	ORO	ORNL	Union Carbide
Liquid High Level Waste R&D	SRO	SRL	Dupont
New Waste Calcining	IDO	INEL	EG & G
Transportation	ALO	SANDIA	Western Electric
Waste Retrieval and Treatment	IDO/RLO	HEDL	Westinghouse
Spent Fuel Storage	SRO	SRL	Dupont

In carrying out these lead assignments a broad range of products, services and skills are required. Most are secured through the GOCO (contractor) facility listed, on the behalf of DOE.

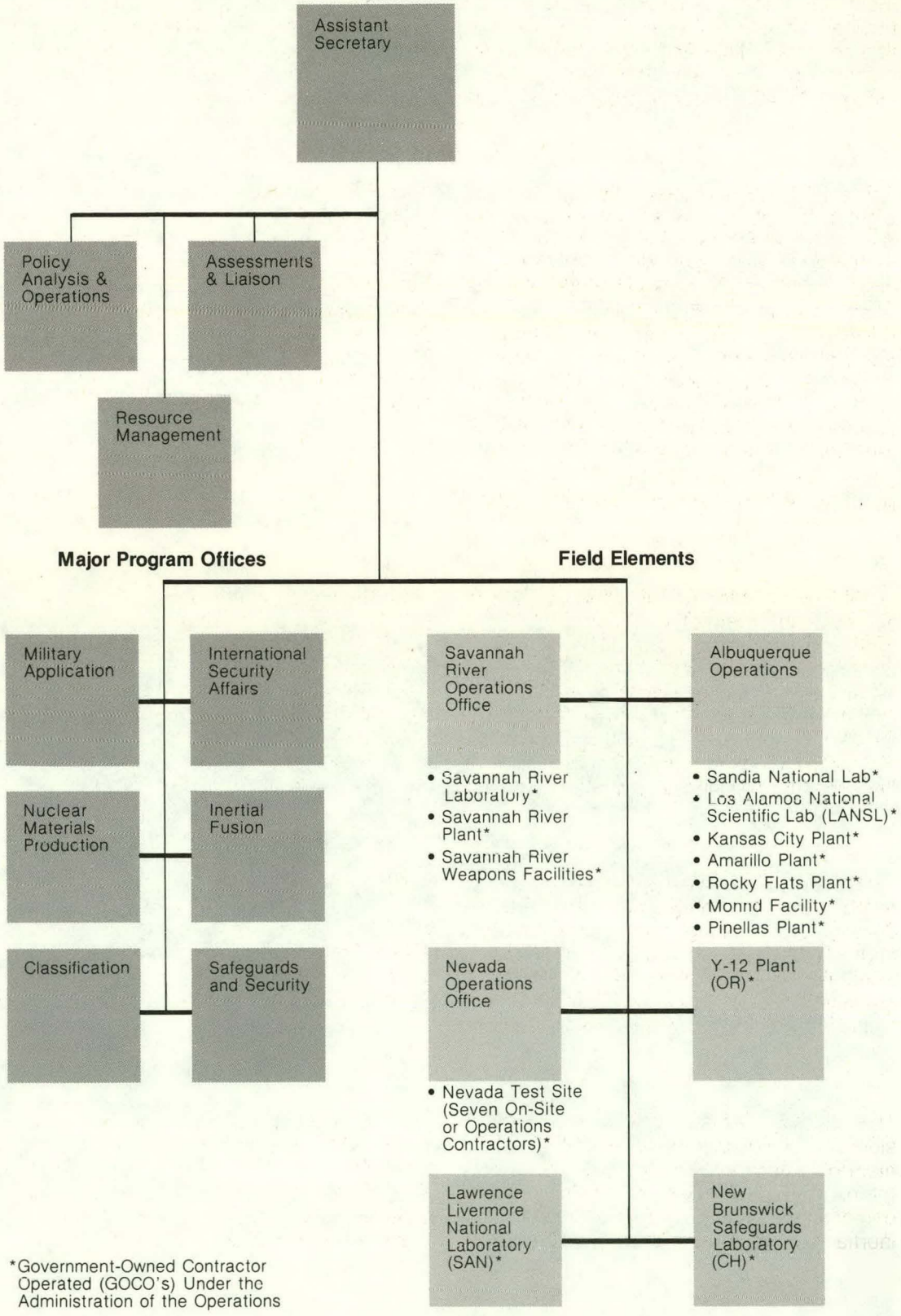
Program contacts are listed in the Directory under the appropriate office or contractor name.



Turbine room #1 at the Baltimore Gas and Electric Company's Calvert Cliffs Nuclear Power Plant, on the Chesapeake Bay.

The calibration of standards involves sophisticated techniques, such as this laser equipment at the secondary standards laboratory.

Defense Programs



*Government-Owned Contractor Operated (GOCO's) Under the Administration of the Operations

DEFENSE PROGRAMS

General Description

Assistant Secretary for Defense Programs (DP) manages and directs the Department of Energy's (DOE's) program for nuclear weapons research, development, testing, production, and surveillance; laser, heavy ion, and electron beam fusion; safeguards and security program; international security program; and classification. In addition, DP is responsible for the Nuclear Materials Production (NMP) program. DP exercises overview responsibility for the DOE weapon complex. There are six program offices and three staff offices within Defense Programs (see organization chart).

Field Elements

Three operations offices, five laboratories, eight production plants and the Nevada Test Site are assigned to the Assistant Secretary for Defense Programs. The operations Offices, Albuquerque, Nevada, and Savannah River, play a significant role in either the development, production, or testing of nuclear weapons. Los Alamos, Lawrence Livermore, and Sandia Laboratores are involved to varying degrees in support of all facets of the weapons program; i.e., design, engineering, test production, and surveillance. The New Brunswick Laboratory supports the security and safeguards program. Savannah River Laboratory is specifically involved in production of nuclear materials. The Mound and Savannah River Weapons Facilities, Amarillo, Kansas City, Pinellas, Rocky Flats, and Y-12 Plants are engaged in the weapon production program. The Savannah River Plant is a major part of DOE's Nuclear Materials Production Program. The Nevada Test Site is reserved for nuclear test operations.

Staff Offices

The Office of Policy Analysis and Operations serves as the contact point on policy issues for the DP field structure. It also is responsible for the institutional management process for all field facilities assigned to the DP. The Office of Resource Management is responsible for monitoring, coordinating, and analyzing the development and implementation of DP program planning documents, management tracking systems, and budget. The Office of Assessments and Liaison provides advice to the Assistance Secretary on congressional, institutional, and communications matters which fall within the purview of DP and manages an evaluation program on the effectiveness of DOE safeguards and security systems.

Office of Military Application

The office of Military Application (OMA) is responsible for programs of research, development, testing, production, storage, and readiness assurance of nuclear weapons; the transportation of strategic quantities of DOE special nuclear materials, including weapons; maintaining liaison between DOE and the Department of Defense on nuclear weapons matters; and administering DOE activities under international and administering DOE activities under international agreements for cooperation involving nuclear defense.

Office of Inertial Fusion

The Office of Inertial Fusion (OIF) is responsible for DOE's inertial confinement (laser, electron beam and heavy ion) fusion program, the objective of which is to demonstrate scientific feasibility and apply inertial confinement fusion to the solution of national security and domestic energy problems. OIF provides broad programmatic direction to the national weapons laboratories to develop and operate major facilities, and assures a broad base of research in universities and private industry.

Office of Safeguards and Security

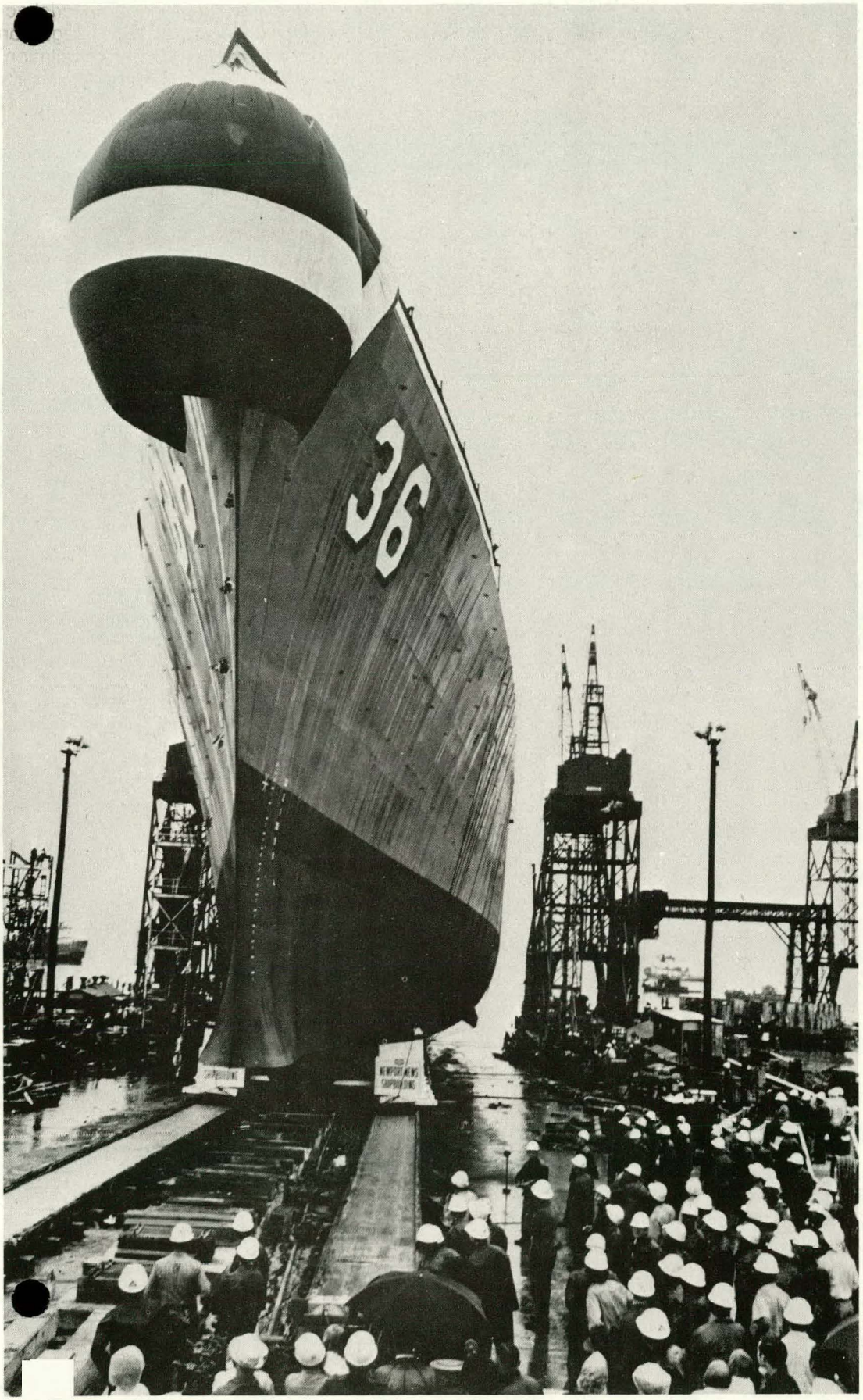
The Office of Safeguards and Security (OSS) is responsible for coordination of DOE's safeguards and security efforts to protect special nuclear materials, all classified activities, and DOE facilities. The office develops, tests, evaluates and implements safeguards systems which employ physical protection, material control and mater c- countability into facility-wide integ n safeguards systems for each installation. The New Brunswick Laboratory supports OSS through research on the security and safeguards of nuclear materials.

Office of International Security Affairs

The Office of International Security Affairs (ISA) plans, develops, analyses, coordinates and directs national security aspects of DOE international activities relating to nuclear technology and materials and political, military, economic and energy affairs. These aspects include nuclear nonproliferation, international safeguards and physical security, international agreements for cooperation, export control, and arms control and disarmament.

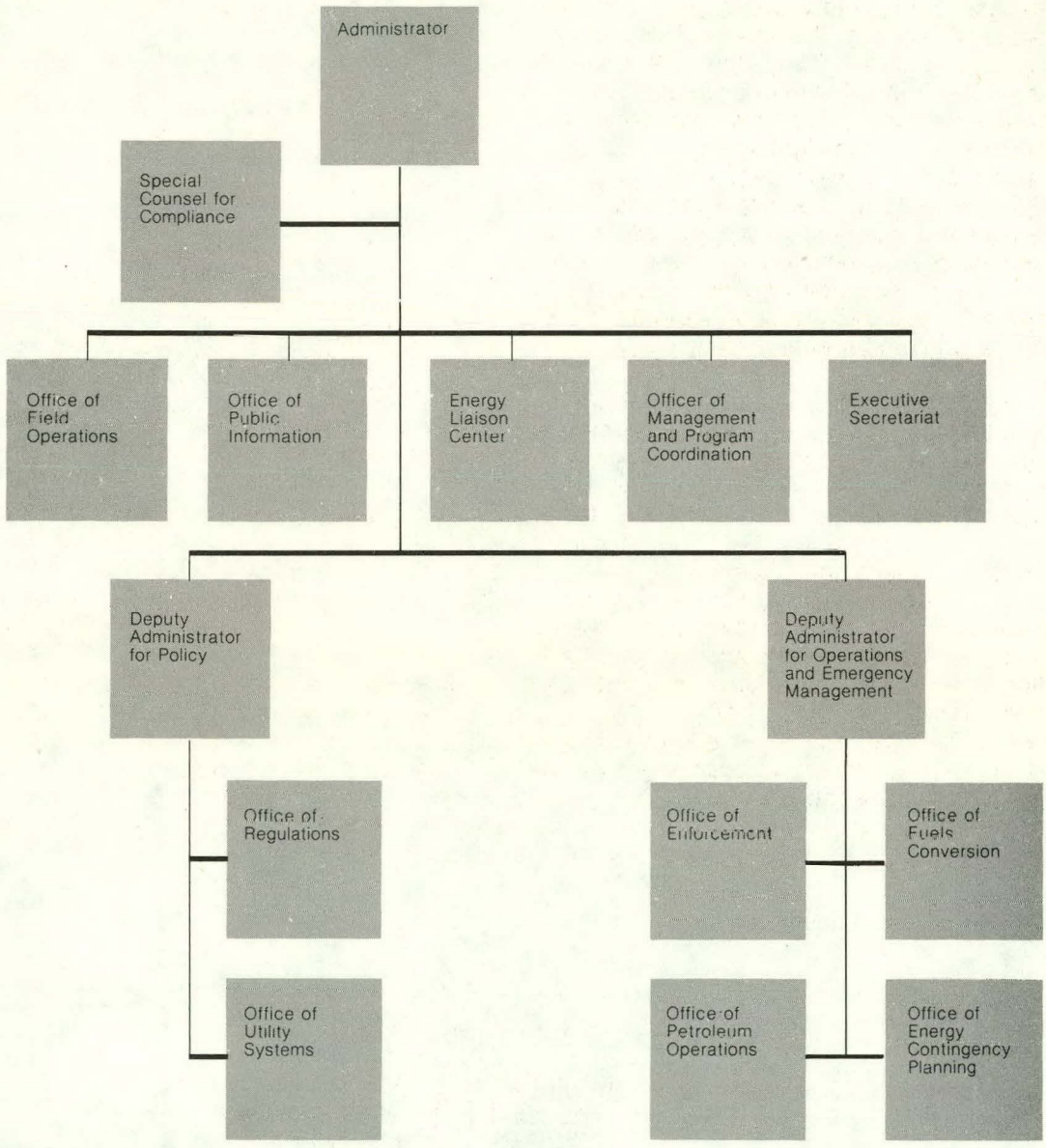
Office of Nuclear Materials Production

The Office of Nuclear Materials Production is responsible for DOE's Nuclear Materials Production Program which provides special materials for national defense requirements and for DOE reactor research and development programs; produces reactor fuel, operates production reactors and reprocesses reactor fuel; and provides steam to the Washington Public Power Supply System. This office also ensures that operations are conducted in a safe, environmentally acceptable and cost-effective manner, and directs the development of new and improved technology for nuclear materials production.



The nuclear powered guided missile Frigate California (DLGN36) is shown as it slides down the ways during the launching ceremony at the Newport News, Va.

Economic Regulatory Administration



ECONOMIC REGULATORY ADMINISTRATION

The ERA Administrator is the principal advisor to the Secretary of Energy on the development, management, and direction of economic regulatory programs other than those which are the responsibility of the Federal Energy Regulatory Commission (FERC) or other DOE components. ERA activities include identifying the need for, developing, promulgating and enforcing regulations; defining regulatory data requirements; and directing, designing, and implementing pricing, allocation, and import and export programs to ensure price stability and the equitable distribution of supplies to domestic users of crude oil, petroleum products, and natural gas liquids.

In addition to programs relating to oil pricing and allocation, the Administrator directs other regulatory programs, including conversion of oil and gas fired utility and industrial facilities to coal or other alternate fuels; natural gas and electric power import/export controls; natural gas curtailment priorities and emergency allocations; regional coordination of electric power system planning and reliability of bulk power supply; contingency planning, and an active intervention program on behalf of the Secretary before the FERC and other Federal and state regulatory agencies in support of Departmental policy objectives.

The functions of the Administration include:

(a) Regulates pricing and allocation of crude oil, petroleum products, natural gas liquids, and natural gas liquid products.

(b) Controls natural gas and oil imports.

(c) Develops and implements necessary systems and procedures to coordinate communication and other operations during an energy emergency.

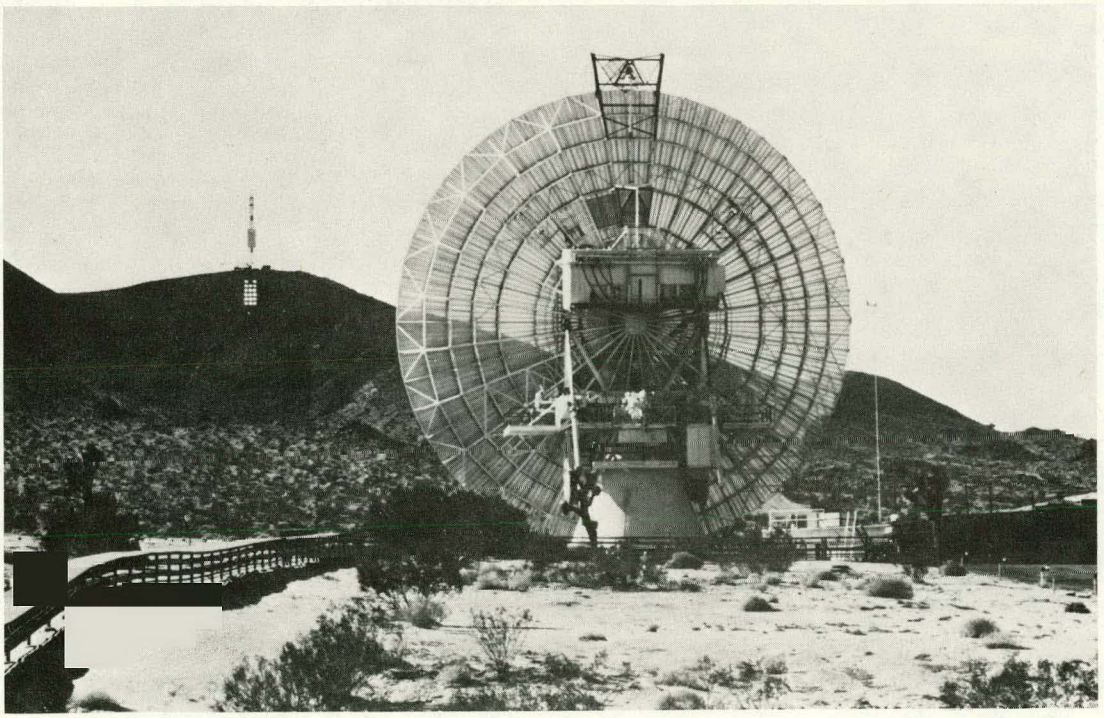
(d) Administers, among other regulatory activities, the programs under the Powerplant and Industrial Fuel Use Act to encourage the use of coal and other alternate fuels by utilities and major industrial installations.

(e) Enforces laws and regulations, audits prices charged by oil companies, and investigates possible criminal and civil violations.

(f) Assures system coordination and interconnection of electric utilities for adequate, reliable bulk power supply, and performs long-range utility planning.

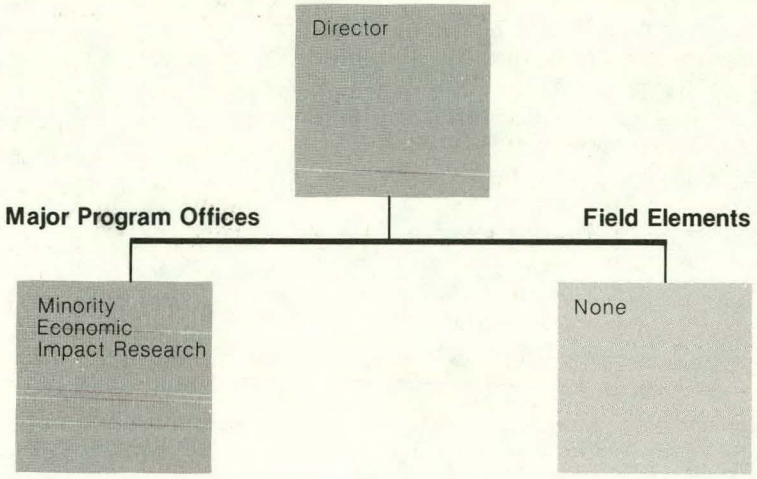
(g) Implements provisions of the Public Utility Regulatory Policies Act through grants, technical assistance, and the development of Federal guidelines.

See the Directory for contact names and addresses.



This is NASA's Goldstone Tracking Station near Barstow, California. The big eighty-five foot venus dish, as it is called, is now studying the problems of beaming converted solar energy from a satellite in space, back to Earth where it can be converted to electricity.

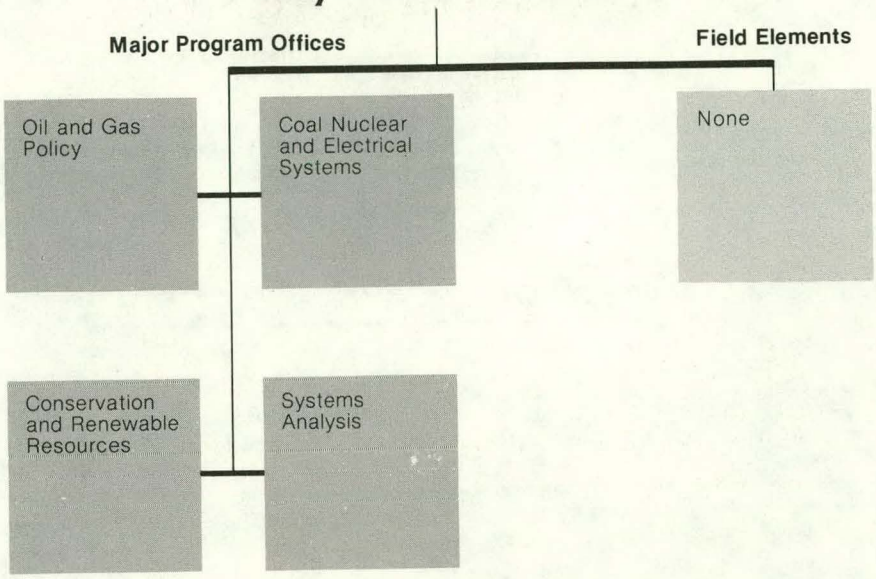
Office of Minority Economic Impact



General Description

The office of Minority Economic Impact was established in 1979 under the National Energy Conservation Policy Act (Public Law 95-916). Along with the DOE Energy Information Administration, the office conducts an ongoing research program to determine the effects of national energy programs, policies and regulations of the Department upon minorities. The studies include the examination of socioeconomic and environmental effects.

Policy and Evaluation

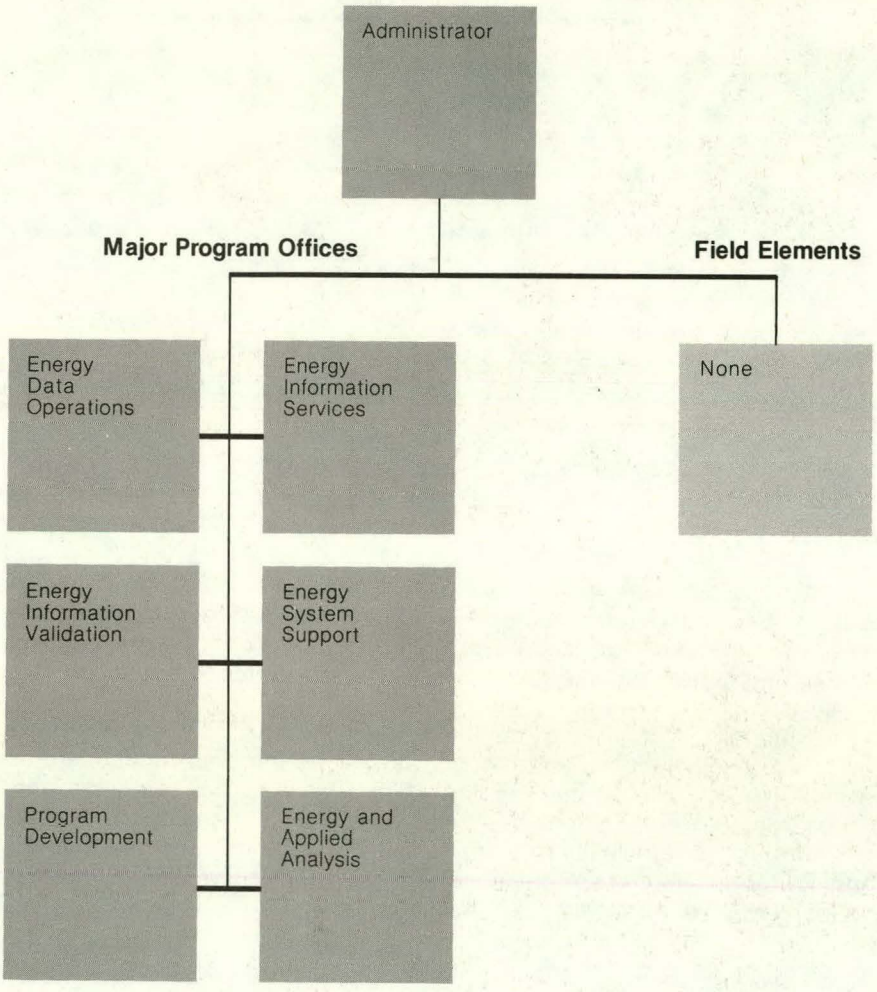


General Description

The Assistant Secretary for Policy and Evaluation assists the Secretary in developing and implementing national energy policy through analysis of critical energy issues and economic, regulatory, social and institutional factors influencing the establishment of Departmental policy coincident with the intent of the President and Congress. This office has primary responsibility for long range planning, for developing the analytical foundation for national energy policy, and for providing independent advice to the Secretary concerning the direction of Departmental programs.

The Office of Policy and Evaluation is organized into four functional areas: Oil and Gas Policy; Coal, Nuclear and Electrical Systems; Conservation and Renewable Resources; and Systems Analysis. It has no administratively assigned field installations.

Energy Information Administration

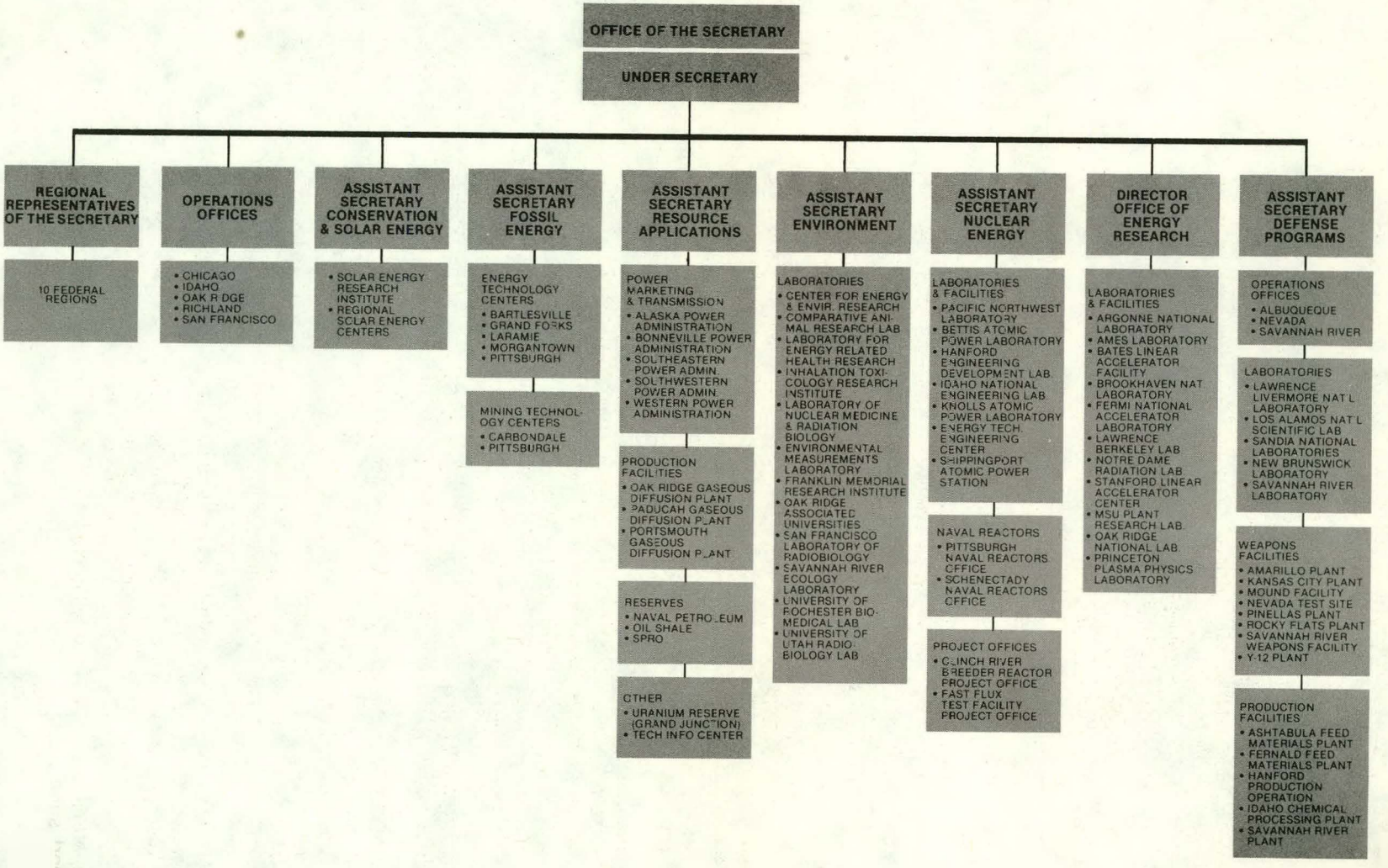


General Description

The Energy Information Administration is responsible for the development, collection, analysis, reporting, forecasting, and dissemination of energy information. For the Department the organization has independent authority to collect and analyze information and determine the substance of statistical or forecasting technical reports. This administration provides data and data-related services to all DOE components.

The administration is divided into six majo program areas as shown above.

Utilization of waste heat


OFFICE OF THE SECRETARY
UNDER SECRETARY
REGIONAL REPRESENTATIVES OF THE SECRETARY
10 FEDERAL REGIONS
OPERATIONS OFFICES
• CHICAGO
• IDAHO
• OAK RIDGE
• RICHLAND
• SAN FRANCISCO
ASSISTANT SECRETARY CONSERVATION & SOLAR ENERGY
• SOLAR ENERGY RESEARCH INSTITUTE
• REGIONAL SOLAR ENERGY CENTERS
ASSISTANT SECRETARY FOSSIL ENERGY
ENERGY TECHNOLOGY CENTERS
• BARTLESVILLE
• GRAND FORKS
• LARAMIE
• MORGANTOWN
• PITTSBURGH
MINING TECHNOLOGY CENTERS
• CARBONDALE
• PITTSBURGH
ASSISTANT SECRETARY RESOURCE APPLICATIONS
POWER MARKETING & TRANSMISSION
• ALASKA POWER ADMINISTRATION
• BONNEVILLE POWER ADMINISTRATION
• SOUTHEASTERN POWER ADMIN.
• SOUTHWESTERN POWER ADMIN.
• WESTERN POWER ADMINISTRATION
PRODUCTION FACILITIES
• OAK RIDGE GASEOUS DIFFUSION PLANT
• PADUCAH GASEOUS DIFFUSION PLANT
• PORTSMOUTH GASEOUS DIFFUSION PLANT
RESERVES
• NAVAL PETROLEUM
• OIL SHALE
• SPRO
OTHER
• URANIUM RESERVE (GRAND JUNCTION)
• TECH INFO CENTER
ASSISTANT SECRETARY ENVIRONMENT
LABORATORIES
• CENTER FOR ENERGY & ENVIR. RESEARCH
• COMPARATIVE ANIMAL RESEARCH LAB
• LABORATORY FOR ENERGY RELATED HEALTH RESEARCH
• INHALATION TOXICOLOGY RESEARCH INSTITUTE
• LABORATORY OF NUCLEAR MEDICINE & RADIATION BIOLOGY
• ENVIRONMENTAL MEASUREMENTS LABORATORY
• FRANKLIN MEMORIAL RESEARCH INSTITUTE
• OAK RIDGE ASSOCIATED UNIVERSITIES
• SAN FRANCISCO LABORATORY OF RADIOBIOLOGY
• SAVANNAH RIVER ECOLOGY LABORATORY
• UNIVERSITY OF ROCHESTER BIOMEDICAL LAB
• UNIVERSITY OF UTAH RADIOBIOLOGY LAB
ASSISTANT SECRETARY NUCLEAR ENERGY
LABORATORIES & FACILITIES
• PACIFIC NORTHWEST LABORATORY
• BETTIS ATOMIC POWER LABORATORY
• HANFORD ENGINEERING DEVELOPMENT LAB.
• IDAHO NATIONAL ENGINEERING LAB.
• KNOLLS ATOMIC POWER LABORATORY
• ENERGY TECH. ENGINEERING CENTER
• SHIPPINGPORT ATOMIC POWER STATION
NAVAL REACTORS
• PITTSBURGH NAVAL REACTORS OFFICE
• SCHENECTADY NAVAL REACTORS OFFICE
PROJECT OFFICES
• CLINCH RIVER BREEDER REACTOR PROJECT OFFICE
• FAST FLUX TEST FACILITY PROJECT OFFICE
DIRECTOR OFFICE OF ENERGY RESEARCH
LABORATORIES & FACILITIES
• ARGONNE NATIONAL LABORATORY
• AMES LABORATORY
• BATES LINEAR ACCELERATOR FACILITY
• BROOKHAVEN NAT. LABORATORY
• FERMI NATIONAL ACCELERATOR LABORATORY
• LAWRENCE BERKELEY LAB.
• NOTRE DAME RADIATION LAB.
• STANFORD LINEAR ACCELERATOR CENTER
• MSU PLANT RESEARCH LAB.
• OAK RIDGE NATIONAL LAB.
• PRINCETON PLASMA PHYSICS LABORATORY
ASSISTANT SECRETARY DEFENSE PROGRAMS
OPERATIONS OFFICES
• ALBUQUEQUE
• NEVADA
• SAVANNAH RIVER
LABORATORIES
• LAWRENCE LIVERMORE NAT'L LABORATORY
• LOS ALAMOS NAT'L SCIENTIFIC LAB
• SANDIA NATIONAL LABORATORIES
• NEW BRUNSWICK LABORATORY
• SAVANNAH RIVER LABORATORY
WEAPONS FACILITIES
• AMARILLO PLANT
• KANSAS CITY PLANT
• MOUND FACILITY
• NEVADA TEST SITE
• PINELLAS PLANT
• ROCKY FLATS PLANT
• SAVANNAH RIVER WEAPONS FACILITY
• Y-12 PLANT
PRODUCTION FACILITIES
• ASHTABULA FEED MATERIALS PLANT
• FERNALD FEED MATERIALS PLANT
• HANFORD PRODUCTION OPERATION
• IDAHO CHEMICAL PROCESSING PLANT
• SAVANNAH RIVER PLANT

Chapter IX

The DOE Field Organizations

Field Organization Functions

The various activities of DOE headquarters are supported through an extensive network of field organizations including regional offices and centers, national laboratories and other contractor-operated facilities and operations offices. The chart on the opposite page shows the organizational relationships between DOE field units and specific DOE headquarters program offices discussed in the preceding pages. The field organization carries out important administrative, management, and procurement/financial assistance functions and takes into account the diversity and geographic dispersion of the field programs, which include regulatory functions; research and development; demonstration; production; maintenance of reserves; and defense research, development and testing.

Field Organization Elements

Elements of the DOE field organization that are related to procurement/financial assistance are the Operations, and Project Offices (DOE); the multiprogram laboratories (GOCO's), the program dedicated facilities (GOCO's) and the production testing, and fabrication facilities (GOCO's). In addition the Secretary has a Regional Representative Office in each of the ten (10) federal regions.

The DOE field offices consist of Operations Offices, which are more general in their scope of activities, plus others dedicated to specific programs or projects. Responsibilities of these offices include project management; contracting with or providing financial assistance to industry, universities, state and local governments, and others as needed; negotiating, executing, and administering award instruments to operate DOE contractor-operated facilities; and contractor/recipient appraisal. Several of the operations offices also provide contract support services to the headquarters program divisions for industrial contractors within their region or within assigned areas of lead mission responsibility. DOE conducts operations through 41 laboratories—12 multiprogram and 29 program dedicated. All of these multi-program and most of the program dedicated laboratories are GOCO's i.e. Contractor Operated. Three of the twelve multi-program laboratories are restricted due to their primary function as weapons laboratories (Lawrence Livermore, Los Alamos, Sandia) but nevertheless serve more than one program office.

Program dedicated laboratories devote nearly 100% of their effort to one specific program area. Greater detail on both types is provided later in this Chapter.

Table IX-1 sets forth the laboratories as well as other types of GOCO's with major on-site contractors and the Operations Office. Lead program office designations are given.

Interaction of Program, Field and GOCO Offices

It should be understood that the operating contractors usually, but not always, perform functions for more than one major program office. One multi-purpose laboratory for example, (Lawrence Livermore Laboratory) had the following principal DOE programmatic activities:

Program Area	*Assistant Secretary*
Defense	Defense
Laser Fusion	Nuclear Energy
Isotope Separation	Energy Research
Magnetic Fusion	Resource Applications
Energy and Resource	Environment
Biological and Environmental	Energy Research
Basic Energy Science	(DOD, NRC, Others)
Other Agencies	

In this case at least 5 major program offices are being served, and are having funds expended. The GOCO (Operating Contractor) for the Lawrence Livermore Laboratory is the University of California but usually approximately 45% of the funds are contracted out to other businesses, i.e. subcontracted. This is often true of GOCO type contractors and is thus a good source of business. This example provides an introduction to the DOE field operations concept which is discussed below. (In the example above given the Operations Office is San Francisco and the lead mission office is Defense Programs.)

Business Contacts

Business organizations are encouraged to discuss and develop possible business opportunities with DOE field organization staffs. The DOE field units, in turn, have been encouraged to carry out cooperative efforts with businesses and industry in key program areas. Lead Mission assignments as described in Chapter V—*What We Buy*—indicate program areas that each are involved in, directly or as a support unit.

Points of contact for possible business opportunities are listed in the Directory, which is included as an insert to this guide.

The remainder of this section is devoted to brief descriptions of each field element. For ease of presentation, field and project offices are grouped together, as are the laboratories.

Table IX-1
Laboratories and Non-Lab GOCO's by Lead Operating and Program Office

Operating Contractors by Operations or Procuring Office	Laboratories: Lead Program Office	Multi-program Laboratories	Program Dedicated Facilities	Other Non-Lab Facilities
Headquarters (PR-50)				
• Williams Bros.	RA			Naval Petroleum 1&3
• Fenix and Scisson	RA			Naval Petroleum 2
• DOE-Pipeline Gas Demo Plants	FE		Morgantown Energy Technology Center	
• TRW	RA			Naval Oil Shale
• DOE Mining Centers	FE		Pittsburgh/Carbondale	
Chicago (CORO)				
• University of Chicago/ University Associates	NE/ER	ANL		
• University of Iowa	ER	Ames		
• Asso. Universities	ER	Brookhaven		
• University Research	ER		Fermi National Accelerator	
• Princeton University	ER		Plasma Physics (PPPL)	
• Univ. of Chicago	EV		Franklin McClean Memorial	
• Mass. Inst. of Tech.	ER		Bates Linear Accelarator	

Operating Contractors Operations Procuring Office	Laboratories Lead Program Office	Multi-program Laboratories	Program Dedicated Facilities	Other Non-Lab Facilities
• Michigan State University	ER		Plant Research	
• Univ. of Notre Dame	ER		N.D. Radiation Lab.	
• Univ. of Rochester	EV		Bio-Medical Lab.	
• Univ. of Utah	EV		Radio-Biology Lab.	
• Midwest Research	CS		SERI	
• MATSCO	FE			MHD Development
• DOE-Coal Technology	FE		Pittsburgh ETC	
• DOE-Safeguards	DP		New Brunswick	
San Francisco (SFO)				
• University of California	ER	LBNL		
	DP	LLNL		
(5 GOCO's)				
	EV		Davis Energy-Related Health Research	
	EV		U.C.L.A. Laboratory of Nuclear Medicine	
	EV		San Francisco Lab of Radio-Biology	
• Stanford University	ER		Linear Accelerator	
• Rockwell (Atomics)	NE			ETEC
• DOE-Oil Recovery	FE		Bartlesville E.T.C.	
• DOE-Coal liquification Gasification	FE		Grand Forks E.T.C.	
• DOE-Petroleum, Coal and Oil Shale	FE		Laramie E.T.C.	
• General Electric	NE			Fast Reactor Development
• General Atomics	NE			Fast Reactor Development
Albuquerque (ALO)				
• Univ. of California	DP	LANSL		
• Western Electric	DP	Sandia		
• Bendix (Weapons)	DP			Kansas City Plant
• General Electric	DP			Pinellas Plant
• Lovelace Institute	EV		Inhalation Toxicology	
• Mason and Hanger	DP			Amarillo Plant
• Monsanto research	DP			Mound Lab
• Rockwell Intl.	DP			Rocky Flats
• Zia				Support
• Los Alamos Constructors	DP			Support
• Westinghouse-Bechtel	NE			Waste Plant Construction

Operating Contractors by Operations or Procuring Office	Laboratories: Lead Program Office	Multi-program Laboratories	Program Dedicated Facilities	Other Non-Lab Facilities
Oak Ridge (ORO)				
• Union Carbide	ER	ORNL		
(5 GOCO's)	RA			O.R. Gaseous Diffusion (GD)
	RA			Pacific Lab
	RA			GD
	DP			Y-12 Weapons
• Goodyear Atomics	RA			Portsmouth G. D.
• O.R. Associated Universities	EV		O.R. Univ. Lab	
• National Lead	DP			Fernald Plant
• Rust-Engineering	DOE			Support (ORO)
-Maintenance	DOE			Support (ORO)
• Univ. of Puerto Rico	EV		Center for Energy and Environment	
• RMI	DP			Ashtabula Plant
• Univ. of Tennessee	EV		Comparative Animal Research	
• Stone and Webster	RA			Portsmouth Construction
• DOE-Fossil R&D	FE			Morgantown E.T.C.
• Lummis (Hydrogen)	FE			H-Coal Plant
• Badger Plants	FE			H-Coal construction
• Ashland Synthetic	FE			H-Coal Plant Op.
• Pittsburgh Midway (Gulf)	FE			Solvent Refined Coal (SRC) I
• Southern Company	FE			SRC II
Richland (RLO)				
• Battelle	NE	PNL		
(2 GOCO's)	NE			Waste Management
• Rockwell-Atomics	DP			Hanford Production Ops
• United Nuclear	DP			Hanford Production
• J. A. Jones	RL-DOE			Support (RLO)
• Boeing Computer	DP			Computer Support
• Hanford Environmental Foundation	EV		Environmental Research Park	
• Westinghouse-Hanford	NE	HEDL		
Fast Flux Test Office (FFTF)	NE			
• Westinghouse-Hanford	NE			Fast Flux Test Facility
Idaho (IDO)				
• EG & G, Inc. (2)	NE	INEL		
	RA			Raft River Geothermal
• Allied Chemical	NE			ID Chemical Plant
• DOE-MHD Project	FE			(see CORO)
• Jones Boecon	DOE			Support
Nevada (NVO)				
• E G & G	DP			NV Test Site (Tech)

Operating Contractors by Operations or Planning Office	Lead Program Office	Laboratories: Multi-program Laboratories	Laboratories: Program Dedicated Facilities	Other Non-Lab Facilities
• Reynolds Elec. (REECO)	DP			NV Test Site (support)
• Holmes and Narver	DP			NV Site (A & E)
(2)	DP			Pacific Test Site
• Computer Sciences	DP			Computer Oper.
• Wachenhut	DP			Security
• Fernix and Scisson	DP			Mining; A & E
Savannah River (SRO)				
• E. I. Dupont	DP	SRL		
(2 GOCO's)	DP			SR Weapons
• Univ. of Georgia	EV		SR Ecology Lab	
Grand Junction (GJO)				
• Bendix Field Eng.	RA			Uranium Resource
Naval Reactors-Pittsburgh (PNR)				
• Westinghouse Electric	NE		Bettis Atomic	
	NE		Naval Reactor Facility (ID)	
• Duquesne Electric	NE			Shippingport Plant
Naval Reactors-Schnectady (SNR)				
• General Electric	NE		Knolls Atomic	
Strategic Petroleum Reserve Office (SPRO)				
• Parsons Gilbane	RA			Construction SPRO
• OAO, Inc.	RA			Computer
Clinch River (CRBRP)				
• Stone and Webster	NE			CR Construction
• Westinghouse, Rockwell and GE	NE			Breeder Reactors
• Bruns and Roe	NE			CR A & E
• TVA-Edison	NE			CR Implementation
Other				
• DOE-Power Marketing				
— Alaska				APA
— Bonneville				BPA
— Southeastern				SEPA
— Southwestern				SWPA
— Western				WPA
• DOE Environment			Environmental Research Lab.	

Operations Offices

MAJOR DOE FIELD OPERATIONS

Albuquerque Operations Office, Albuquerque, New Mexico

The Albuquerque Operations Office is principally concerned with the management of the nuclear weapons research, development and production complex. This includes basic physical and biomedical research, nuclear safety programs, thermonuclear conversion of energy for power applications, nuclear and nonnuclear energy development, and the detection of nuclear explosions.

Chicago Operations and Regional Office, Argonne, Illinois

The Chicago Operations and Regional Office is responsible for the administration of research and development projects and associated engineering and construction including the development of energy sources particularly in advanced nuclear reactor systems; fossil, solar, geothermal, and other energy alternatives; and basic and applied research programs in the biological, medical, and physical sciences. Chicago Operations Office staff members also administer contracts for the operation of major Government-owned laboratories, and contracts and grants with educational institutions and industrial concerns.

Idaho Operations Office, Idaho Falls, Idaho

The Idaho Operations Office administers the DOE Idaho National Engineering Laboratory. Currently, the Idaho Operations Office has major developmental assignments in geothermal energy, low-head hydroelectric applications, and a magnetohydrodynamic coal-fired power plant. Other programs include reactor safety testing, reactor fuels and materials testing, reprocessing of Government-owned nuclear fuels, and radioactive waste management. Most of the work is conducted in Government-owned contractor facilities but some is performed under grants or contracts with industry, and state or local governments. The office also directs an engineering and construction program, the Radiological and Environmental Sciences Laboratory, and the National Environmental Research Park.

Nevada Operations Office, Las Vegas, Nevada

The Nevada Operations Office is concerned with the management and support of nuclear detonation programs for weapons development, detection of nuclear explosions, peaceful application of nuclear explosives, and conducting research and development projects on energy recovery techniques independent of nuclear explosives. It plans and programs nuclear test events at the Nevada Test Site and provides support services to DOE weapons laboratories and Department of Defense agencies at the test locations. Included are the maintenance and operation of test sites and the design and construction of test facilities, including extensive drilling and mining activities.

Oak Ridge Operations Office, Oak Ridge, Tennessee

The Oak Ridge Operations Office is responsible for wide-ranging programs in production, research education and training. A major function of the Oak Ridge Operations Office is management of the processing of uranium concentrates and other source and raw materials into feed materials, and the further processing of uranium feed materials into uranium 235. This is accomplished at DOE gaseous diffusion plants located at Oak Ridge, Tennessee; Paducah, Kentucky; and Portsmouth, Ohio. Another major function relates technology development in the fossil area. The Oak Ridge Operations Office also manages research, development and production at Government-owned contractor-operated facilities relating to weapons component production, reactor development and technology, fusion research, breeder reactor research and demonstration, biological research, health physics, environmental studies, and nuclear and nonnuclear education and training programs.

Richland Operations Office, Richland, Washington

The Richland Operations Office is concerned with the processing of uranium feed materials into special nuclear material, and with research in reactor development, reactor fuels, chemical processing, radioactive waste management, and biology and medicine. Facilities include nuclear reactors, chemical processing plants and various laboratories.

San Francisco Operations Office, Oakland, California

The San Francisco Operations Office is involved with research and development activities in the physical sciences; biology and medicine; and solar, geothermal and other alternative energy sources. The Office's principal contractor is the University of California, which operates laboratories at Livermore and Berkeley, California.

Savannah River Operations Office, Aiken, South Carolina

The Savannah River Operations Office is primarily concerned with the operations of the Savannah River Plant for production of special nuclear material. Plant operations consist of fuel element fabrication, nuclear reactors, fuel reprocessing facilities, and heavy water production facilities. In addition, it manages the Savannah River Laboratory, which conducts research and development activities in support of plant operations and DOE programs. E. I. DuPont de Nemours & Co., Inc., is responsible for the design, construction, and operation of the plant facilities.

Field Offices

Grand Junction Office, Grand Junction, Colorado

This office supervises the Uranium Resources Assessment Facility (GOCO) operated by Bendix. As such it is concerned with estimating national resources of uranium; providing data needed by DOE; other Government agencies and the nuclear industry in planning for national energy requirements; evaluating uranium resources in the United States; developing resource estimates for industry use in exploration for additional uranium to satisfy requirements for nuclear power; developing improved uranium exploration, assessment, and production technology; administering leases of mineral lands under DOE control; and carrying out activities relating to environmental effects of uranium mining and milling operations and corrective programs (Proposals for work in these areas should be submitted directly to the Grand Junction Office.)

Strategic Petroleum Reserve Office

The purpose of the Strategic Petroleum Reserve (SPR) is to provide for a reserve of up to 1 billion barrels of petroleum in order to diminish U.S. vulnerability to the effects of a severe petroleum supply interruption and to provide a limited protection from the short-term consequences of interruptions in the supply of petroleum products. The program provides for an Early Storage Reserve (ESR) of not less than 150 million barrels (MMB).

Five sites with existing underground storage capacity included in the SPR are:

- West Hackberry Salt Dome, Cameron Parish, Louisiana;
- Bryan Mound Salt Dome, Brazoria County, Texas;
- Bayou Choctaw Salt Dome, Iberville Parish, Louisiana;
- Weeks Island Salt Mine, New Iberia Parish, Louisiana;
- Sulphur Mine Dome, Calcasieu Parish, Louisiana

The construction and operation of these sites, as well as support to the DOE management offices, provide business contracting opportunities.

Pittsburgh Naval Reactors Office

The Pittsburgh Naval Reactors Office is responsible for the administration and review of programs for research and development, design, fabrication, construction, testing, operation, and improvement of naval nuclear propulsion and civilian power reactor plants.

The Pittsburgh Naval Reactors Office administers the contract with Westinghouse Electric Corporation for the operation of the Bettis Atomic Power Laboratory and the contract with Duquesne Light Co. for the operation of the Shippingport Atomic ver Station (both GOCO's).

Schenectady Naval Reactors Office

The Schenectady Naval Reactors Office is responsible for the administration and review of programs for research and development, design, fabrication, construction, testing, operation, and improvement of naval nuclear propulsion and civilian power reactor plants. The Schenectady Naval Reactors Office administers the contract with General Electric Co. for the operation of the Knolls Atomic Power Laboratory.

Energy Technology Centers

The five Energy Technology Centers and the two Mining Technology Centers report to the Assistant Secretary for Fossil Energy. Each is discussed below.

Bartlesville Energy Technology Center, Bartlesville, Oklahoma

The Bartlesville Energy Technology Center has a major research mission in the production and utilization of petroleum, natural gas and other types of energy. The Center has responsibility for monitoring large-scale contracts in projects designed to enhance the recovery of crude oil and natural gas and is the lead technical organization for internal combustion energy research.

Grand Forks Technology Center, Grand Forks, North Dakota

The Grand Forks Energy Technology Center has the applications center responsibility for investigations that will aid extraction, processing, and utilization of low rank coal, including lignite, so that its value to the economy can be realized under conditions compatible with the natural environment. The Center houses administrative offices and small-scale laboratories plus a pilot plant for investigations.

Laramie Energy Technology Center, Laramie, Wyoming

The Laramie Energy Technology Center is concerned with research and development directed toward the production and utilization of supplemental sources of energy in an environmentally acceptable manner. Major areas involve oil shale research, the recovery of bitumen from tar sand deposits, and in situ coal gasification research. The work is performed both at Laramie and at various field locations in Wyoming, Utah and Colorado.

Morgantown Energy Technology Center, Morgantown, West Virginia

The Morgantown Energy Technology Center is directed chiefly toward new and improved technology to provide clean energy and fossil fuels with minimum waste production and pollution. It is the lead DOE activity for unconventional gas recovery, fluidized bed combustion, gas stream cleanup, flue gas desulfurization, combined cycle component integration, surface coal gasification, and component development for coal conversion and utilization processes. Nuclear meters are being developed to determine rapidly the moisture and sulfur content of coal in preparation plants, thus minimizing coal loss to refuse thereby producing a cleaner product.

Pittsburgh Energy Technology Center, Pittsburgh, Pennsylvania

The Pittsburgh Energy Technology Center conducts research on new coal uses that will extend national alternate energy sources. It is the lead DOE organization for coal liquefaction, synthetic fuels characterization, coal-oil mixtures, combustion pheno and magnetohydrodynamic combustior

Pittsburgh Mining Technology Center, Pittsburgh, Pennsylvania

The Pittsburgh Mining Technology Center is a federally owned technology development center that is located close to the DOE Pittsburgh Energy Technology Center, the Department of Labor Mine Health and Safety Administration and the Bureau of Mines Pittsburgh Mining and Safety Research Center. It is concerned with underground coal mining technologies and research required to more efficiently mine and prepare the coal needed to meet the Nation's current and projected demand.

Carbondale Mining Technology Center, Carbondale, Illinois

The Carbondale Mining Technology Center is a federally owned and operated research facility involved with development of better methods for solid fossil fuel extraction. It is affiliated with Southern Illinois University, thereby providing close contact with the academic community. The Center is responsible for implementing and monitoring a significant portion of program funded by DOE and conducted by private industry.

Power Marketing Administrations — Petroleum and Oil Shale Reserves

Introduction

Surplus power not necessary to operate government-owned hydroelectric projects is marketed by the Power Marketing Administrations (PMA's) to help repay the Federal Government's investments in the projects. In addition, PMA's are authorized to construct or aquire transmission lines and related facilities which are necessary to generate the power and energy. This power is priced at the lowest possible rate consistent with sound business principles to recover the costs of producing the power.

The five Federal PMA's are the Alaska Power Administration, Bonneville Power Administration, Southeastern Power Administration, Southwestern Power Administration, and Western Area Power Administration.

The Assistant Secretary for Resource Applications is responsible for coordinating and overseeing the operations of the Federal PMA's within a framework which preserves them as separate and distinct organizational entities within the department, but ensures conformance to the National Energy Policy objectives.

The management of the Naval Petroleum and Oil Shale Reserves in California, Utah, and Wyoming is also the responsibility of the Assistant Secretary for Resource Applications.

More detail on the PMA's and Naval Petroleum and Oil Shale Reserves is given below.

Alaska Power Administration

The Alaska Power Administration (APA) operates, maintains, and markets power from Alaska's two Federal hydroelectric projects. These projects are the 30,000 kilowatt (KW) Eklutna Project, serving the Anchorage-Palmer area, and the 47,160 KW Snettisham Project, serving the Juneau area.

APA investigates and plans for developing and utilizing Alaska's water, power, and related resources. Much of their planning work focuses on hydroelectric resources, transmission systems, and power market analyses. Alaska has some good options in abundant resources of coal and undeveloped hydroelectric power. Current Federal, state, and local efforts focus on developing these alternatives.

APA investigation programs involve engineering, economic, and environmental studies for future water and power developments in Alaska, including necessary evaluations of transmission systems, power market analyses, and estimates of future power requirements.

Major areas of emphasis in the planning program include investigation of smaller hydroelectric projects to serve isolated coastal cities in Alaska. This group of cities has access to good local hydro resources, but otherwise depends on petroleum products for all their energy.

Bonneville Power Administration

Bonneville Power Administration (BPA), created by the Bonneville Project Act of 1937 is responsible for the construction of transmission lines and the marketing of power from Federal hydroelectric projects in the Pacific Northwest.

BPA markets power from 30 Federal hydroplants operated by the Army Corps of Engineers and the Bureau of Reclamation. It also markets the output of the Hanford Nuclear Generating Plant and part of the output of the coal-fired Centralia Thermal Project and the Trojan Nuclear Project.

BPA's customers include both public and investor-owned utilities, cooperatives, large industrial installations, and state and Federal agencies. BPA sells surplus power and interchanges power with utilities in California and British Columbia.

Major program and project assignments include:

- Market electric power from Federal dams.
- Wheel power for non-federal generating systems.
- Construct, operate, and maintain its transmission system.
- Perform and participate in R&D to improve EHV and UHV technology.
- Prepare wholesale rates and repayment schedules.
- Participate in regional power planning.
- Developing a formula for power allocation.
- Carry out an energy conservation program.

Southeastern Power Administration

The Southeastern Power Administration markets the electric power and energy generated at Federal hydroelectric projects in ten Southeastern states. Southeastern owns no transmission facilities. Delivery of the power is accomplished through contractual arrangements with area utilities utilizing existing non-Federal transmission facilities.

Sale of power is accomplished in such a manner as to encourage the most widespread use at the lowest possible rates to consumers consistent with sound business principles, with preference in the sale given to public bodies and cooperatives.

Southwestern Power Administration

The Southwestern Power Administration manages the transmission and marketing of electric power and energy generated in designated Federal reservoir projects in the Southwest. The sale of this power is accomplished in such a manner as to encourage its most widespread use at the lowest possible rates to consumers consistent with sound business principles. Preference in the sale of such power and energy is given to public bodies and cooperatives.

Among its functions are:

- Construction of transmission lines, and related facilities, to interconnect Federal reservoir projects with each other and with other electric systems in order to serve contractual loads;
- Maintenance and operation of such facilities, scheduling of power production, accounting for and billing for power sold or interchanged; and,
- Participation in cooperative planning of resources development in relation to power marketing programs in the Southwest region.

Western Area Power Administration (WAPA)

The Western Area Power Administration (WAPA) markets the power and energy generated at Federal generating projects in 15 western states to wholesale power customers (426), constructs transmission facilities in selected areas, and operates and maintains an extensive high-voltage transmission system. WAPA will construct, operate, and maintain additional transmission facilities that may be needed and authorized in the future to assure reliable electric service.

WAPA serves a marketing area of 1,269,956 square miles in 15 western states (California, Nevada, Utah, Arizona, Montana, Wyoming, Colorado, New Mexico, western Texas, North Dakota, South Dakota, Nebraska, Kansas, western Minnesota, and western Iowa).

In addition to marketing federally generated electric power, constructing, operating, and maintaining its transmission system, WAPA prepares wholesale rates and repayment schedules, participates in joint transmission planning and develops and administers formulas for power allocations.

Construction during FY 1980 is estimted at $50-60 million.

Petroleum and Oil Shale Reserves

The Office of Naval Petroleum and Oil Shale Reserves (RA) has cognizance over three petroleum and three oil shale reserves. By Public Law 94-258, enacted on April 6, 1976, the Petroleum Reserves were opened to full production on July 3, 1976, and are currently being developed to achieve their maximum efficient rate of production. By enactment of this law, the reserves will remain open until 1982, with the possibility of 3-year extensions if directed by the President and Congress.

Major Program and Project Assignments include:

- Evaluate the resources at the Naval Oil Shale Reserves.
- Develop the Naval Petroleum Reserves and produce at the maximum efficient rate until April 4, 1982, unless extended. Production rates must be at a level so as to not reduce maximum ultimate recovery of hydrocarbons.
- Construct or acquire the capability to transport NPR production to refineries or sale points.
- Explore and develop reserves underlying the Naval Petroleum Reserves not previously proven or known.
- Sell the Federal Government's share of production from the Naval Petroleum Reserves at public sale to the highest qualified bidder.

Multiprogram Laboratories

Introduction

The 12 multiprogram laboratories represent the core of the integral DOE scientific and technological base. Of the 12 laboratories, nine are unrestricted in their availability to serve all DOE programs (Ames, Argonne, Brookhaven, Hanford, Idaho, Lawrence Berkeley, Oak Ridge, Pacific Northwest and Savannah River) and three are limited in their availability and referred to as weapons laboratories (Lawrence Livermore, Los Alamos and Sandia). Each of these laboratories is discussed briefly in the following paragraphs.

Ames Laboratory, Ames, Iowa

Ames Laboratory is operated for DOE by Iowa State University under the administrative management of the Chicago Operations and Regional Office. It conducts research principally in material sciences centering on the preparation, purification, chemical characterization and structure identification of new materials, followed by evaluation and interpretation of their chemical, physical and mechanical properties. Other programs include chemical analyses, pollutant identification, solar demonstration, and nuclear isotope and heavy ion studies.

Argonne National Laboratory, Argonne, Illinois and Idaho Falls, Idaho

Argonne National laboratory is operated for DOE by the University of Chicago and the Argonne Universities Association, under the administrative management of the Chicago Operations and Regional Office (CORO). It is principally involved in reactor development, with other programs in basic energy sciences, energy and technology, high energy physics, and biomedical and environmental research.

Brookhaven National Laboratory, Upton, Long Island, New York

Brookhaven National Laboratory is operated for DOE by Associated Universities, Inc., under the administrative management of the Chicago Operations and Regional Office. It is involved in high energy physics and research in basic energy sciences. About 60% of

Brookhaven effort is devoted to advanced energy systems, with lesser activity in environmental research, conservation and the National Synchrotron Light Source Accelerator (ISABELLE) is currently under construction at Brookhaven.

Hanford Engineering Development Laboratory, Richland, Washington

Hanford Engineering Development Laboratory is operated for DOE by the Westinghouse Hanford Company, under the administrative management of the Fast Flux Test Facility Project Office and the Richland Operations office. Principal program activity is concentrated on breeder reactor technology with smaller efforts in fuel cycle research and development, magnetic fusion development and technology, and nuclear research and applications.

Idaho National Engineering Laboratory, Idaho Falls, Idaho

Idaho National Engineering Laboratory is operated for DOE by EG&G Idaho, Inc., and Exxon Nuclear Idaho Co., Inc., under the administrative management of the Idaho Operations Office. Present assignments for this laboratory include reactor safety, materials and fuels processing, waste management, liquid metal-cooled fast breeder reactor and geothermal energy research and development, naval propulsion reactors testing, and radiological and environmental research.

Lawrence Berkeley Laboratory, Berkeley, California

Lawrence Berkeley Laboratory is operated for DOE by the University of California under the administrative management of the San Francisco Operations Office. It is principally involved in fundamental research in high-energy and nuclear physics and in the basic energy sciences. Other research is conducted on the fundamental biological processes in plants and animals, and in energy conservation. The Laboratory operates several accelerators and directs the National Resource for Computation in Chemistry.

Lawrence Livermore National Laboratory, Livermore, California

The Lawrence Livermore National laboratory is operated for DOE by the University of California under the administrative management of the San Francisco Operations Office. Nuclear weapons design accounts for approximately half the laboratory's effort and continues to be its primary responsibility. The program addresses current weapons requirements of the Department of Defense, exploration of new nuclear explosive concepts, a broad range of research and development, and the conduct of nuclear tests essential for exploration and design of nuclear explosives. Other Livermore Laboratory programs incude laser fusion technology development, laser isotope separation methods, and biomedical and environmental studies.

Los Alamos National Scientific Laboratory, Los Alamos, New Mexico

The Los Alamos National Scientific Laboratory is operated for DOE by the University of California under the administrative management of Albuquerque Operations Office. In the field of weapons, which constitutes about half the activities at Los Alamos, the laboratory is responsible for the development of nuclear warheads. Nonweapons work is concentrated on advanced nuclear reactor designs, the physics of controlled thermonuclear reactions, nuclear science research, and environment and safety. The laboratory also operates on 800 MeV proton accelerator.

Oak Ridge National Laboratory, Oak Ridge, Tennessee

The Oak Ridge National Laboratory is operated for DOE by the Union Carbide Corporation, Nuclear Division, under the administrative management of the Oak Ridge Operations Office. The activities are largely directed toward four areas roughly equal in size: fission energy development, biomedical and environmental research, basic energy sciences, and magnetic fusion. In addition, there are growing programs in fossil energy and conservation. Oak Ridge houses the fast breeder reactor program and is responsible for heavy ion research and superconducting magnet test facilities.

Pacific Northwest Laboratory, Richland, Washington

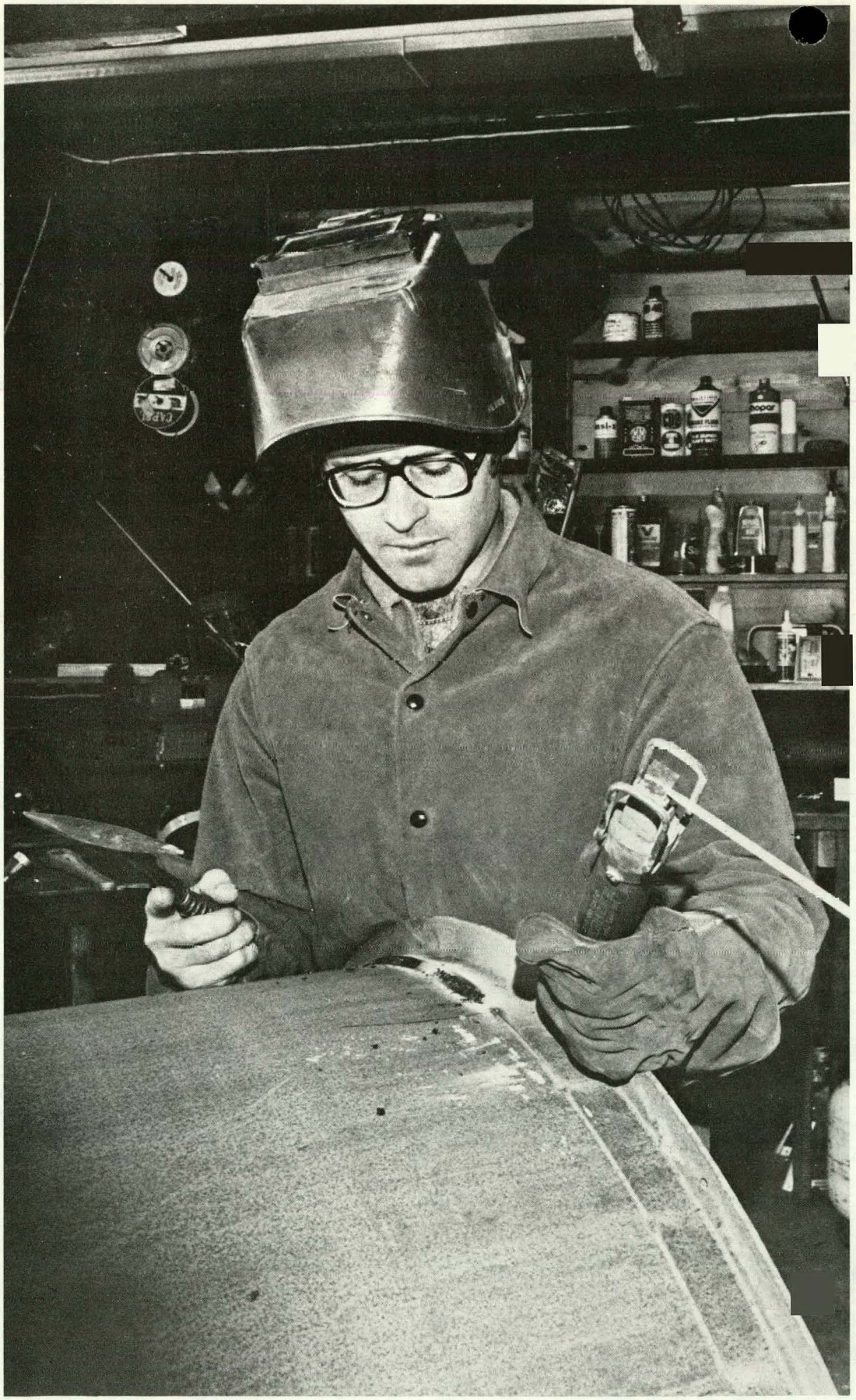
Pacific Northwest Laboratory is operated for DOE by Battelle Memorial Institute under the administrative management of the Richland Operations Office. It works on various programs, principally in nuclear fuel cycle research and development. Other programs include environmental research and development, solar energy and research in basic energy sciences.

Sandia National Laboratories, Albuquerque, New Mexico and Livermore, California

The Sandia National Laboratories are operated for DOE by the Western Electric Company under the administrative management of the Albuquerque Operations Office. Sandia's central mission is the development of the nonnuclear portions of nuclear weapons. Sandia is also responsible for major programs in fossil, solar, and laser fusion. In addition, the Nuclear Regulatory Commission sponsors major projects at Sandia in advanced reactor research and nuclear fuel cycle safety.

Savannah River Laboratory, Aiken, South Carolina

Savannah River Laboratory is operated for DOE by E. I. du Pont de Nemours and Company, under the administrative management of the Savannah River Operations Office. It provides developmental and technical assistance in all phases of the nuclear fuel cycle: uranium resource evaluation, fuel fabrication, isotope production, reactor physics and engineering, fuel reprocessing, waste management, environmental monitoring, and heavy water production.



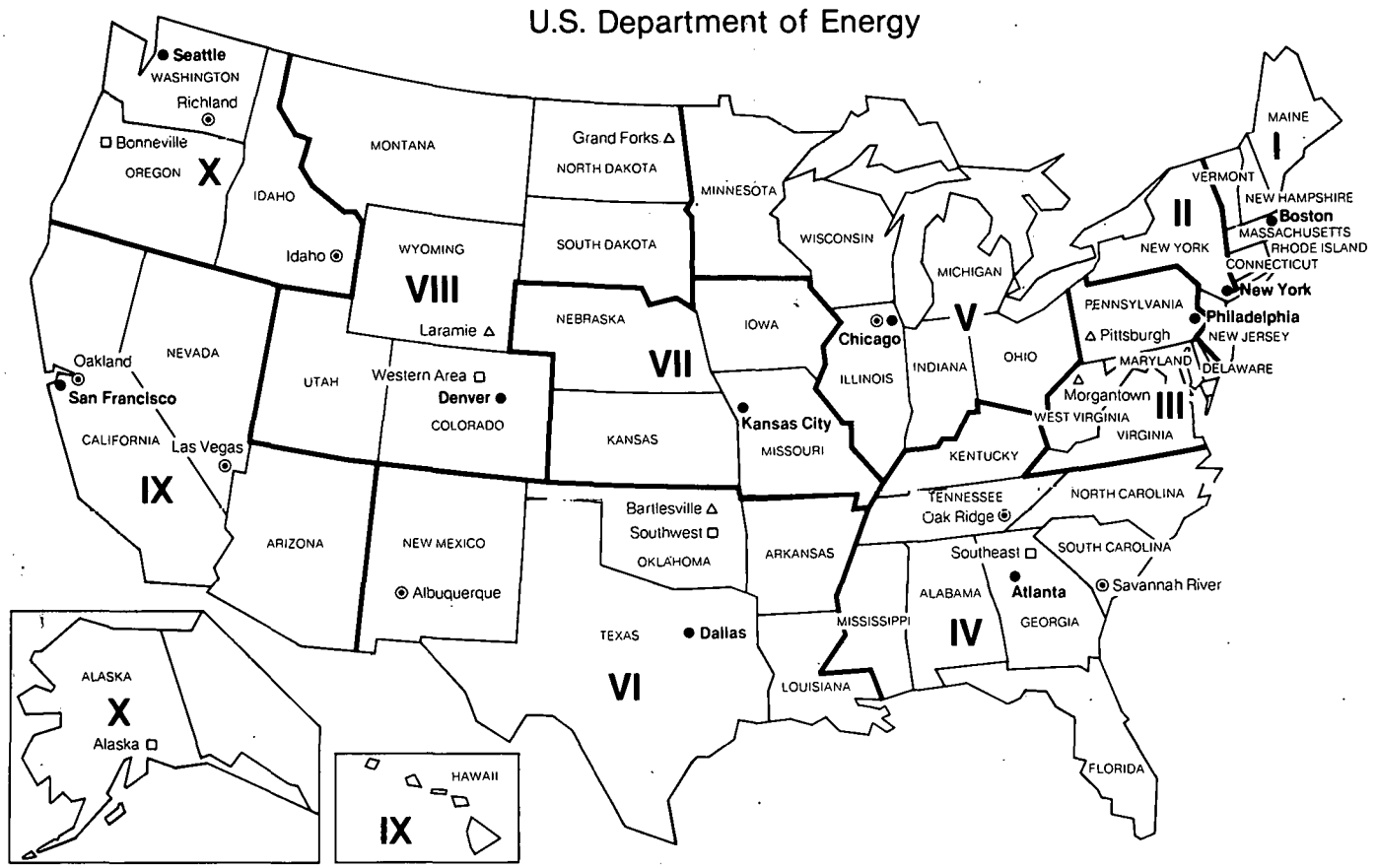
Extracting heat from waste water

Regional Offices

Regional Representatives of the Secretary are located in each of the ten Federal regions. Staff members in these offices may be contacted for general information about Department programs and functions.

The Regional offices are also responsible for the administration of certain delegated programs including the Small Scale Technology Program and oversight of state energy conservation programs and plans.

A map of the Regions is shown on this page. Addresses and telephone numbers of the Regional offices are given in the Directory.



Region	
Puerto Rico	II
Virgin Islands	II
Canal Zone	IV
American Samoa	IX
Guam	IX
Trust Terr. Pacific Is.	IX

Key

- ● Regional Office
- ◉ Operations Office
- △ Energy Technology Center
- □ Power Administration

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3. **Federal Register**, available by subscription from GPO.
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5. **OMB Circular** Nos. A-21, A-102, A-110 and A-111, OMB.
6. **DOE Procurement Regulations** (DOE/PR-0028), June 1979, published in the Federal Register and in the Code of Federal Regulations (CFR) as Chapter 9, Title 41, GPO (Stock Number 061-000-00316-9).
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11. **DOE Research and Development and Field Facilities**, (DOE/ER-0029), June 1979, GPO (Stock Number 061-000-00318-5), NTIS.
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18. **Federal Procurement Regulation**, July 1, 1980, published annually in the Code of Federal Regulations (CFR) as Chapter 1 and 2, title 41 GPO.
19. **Catalog of Federal Domestic Assistance**, published annually, GPO.

Publications listed above can be obtained from:

GPO — Superintendent of Documents
U.S. Government Printing Office
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NTIS — National Technical Information Service
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OMB — Office of Management and Budget
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