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Doing Business With DOE's Fossil Energy Office

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A Guide for the Oil and Gas Industry

March 1990

United States Department of Energy
Assistant Secretary for Fossil Energy
Office of Oil, Gas, Shale and Special Technologies
Washington, D.C. 20585

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I. INTRODUCTION

This guide has been prepared to assist those in the oil and gas industry who may not be totally familiar with how the federal government, particularly the U.S. Department of Energy (DOE), does business with private sector companies. Basic information is provided on what DOE is trying to do, why it wants to work with the oil and gas industry, how it can work with companies, and who to contact and where to write for further information. This last item is noteworthy because it is important for users of this guide to be able to get the details about subjects that may interest them. The guide provides an address and/or phone number for every topic covered to prevent informational "deadends". If a question is not adequately answered by the guide, please do not hesitate to contact the appropriate person or office.

We hope that the information provided in this guide will lead to a better understanding of the mission, roles and procedures of DOE and result in more and better cooperative working relationships between the oil and gas industry and DOE. Such relationships will provide a significant benefit to our nation's economic, technological and energy security. If you have suggestions on improvements to this guide which would make it more effective in achieving its goal, or if you have any difficulties in getting your questions answered, please contact Marvin I. Singer at the address provided on page 5.

A. DOE Mission and Relationship to the Public Sector

DOE provides the framework for a comprehensive and balanced national energy plan through the coordination and administration of the energy functions of the federal government. It is responsible for research and development of energy technologies; the marketing of federal power; energy conservation; the nuclear weapons program; energy regulatory programs; and a central energy data collection and analysis program.

DOE looks to the private sector to assist in the accomplishment of its mission and program objectives. Therefore, it is DOE's policy to encourage outside organizations and individuals to participate in all areas of energy and energy-related research and development and to originate imaginative and innovative exploratory research ideas and proposals which are relevant to DOE's mission and will assist in the development and efficient use of reliable energy sources. DOE's Clean Coal Technology Demonstration Program is an example of DOE-private industry joint technology development efforts.

B. Fossil Energy Mission

The Assistant Secretary for Fossil Energy (FE) is responsible for research and development programs involving fossil fuels -- coal, petroleum, gas. The FE programs involve fundamental and applied research, exploratory development, and limited proof-of-concept testing targeted to high-risk and high-payoff endeavors. The objective of the programs is to provide the general technology and knowledge base that the private sector can use to complete development and initiate commercialization of advanced processes and energy systems. The programs are executed through two energy technology centers located in the field (Morgantown, West Virginia; and

Pittsburgh, Pennsylvania), a project office in Bartlesville, Oklahoma and a site office in Metairie, Louisiana.

The Assistant Secretary also manages the Clean Coal Technology Demonstration Program, the Strategic Petroleum Reserve, the Naval Petroleum and Oil Shale Reserves, and the Liquefied Gaseous Fuels Spill Test Facility. Organizational structure for the FE Office is given in Exhibit 1.

C. Office of Oil, Gas, Shale and Special Technologies Organization and Mission

The mission of the Office of the Deputy Assistant Secretary for Oil, Gas, Shale and Special Technologies (OGSST) is to promote through private industry the development of improved processes for increasing the production of energy supplies from petroleum and gas reservoirs and oil shale deposits, and for converting underground coal seams that are not readily mineable by conventional methods into useful fuels. OGSST also develops magnetohydrodynamics and fuel cell technologies. Its policy is to maintain maximum involvement of the private sector in the programs and to actively and continually solicit the views of industry in program planning and implementation. OGSST recognizes its responsibility to maintain cognizance of private sector activities and to prevent duplication of such activities within the federal programs. These R&D programs are aimed at increasing the domestic production of fossil fuels that can be substituted for imported oil.

1. Responsibilities

The Office of Oil, Gas and Shale Technologies (OGST), as one of two major subdivisions of OGSST, is responsible for:

- Developing strategies and plans for programs in enhanced oil recovery (EOR) and extraction of oil from tar sands;

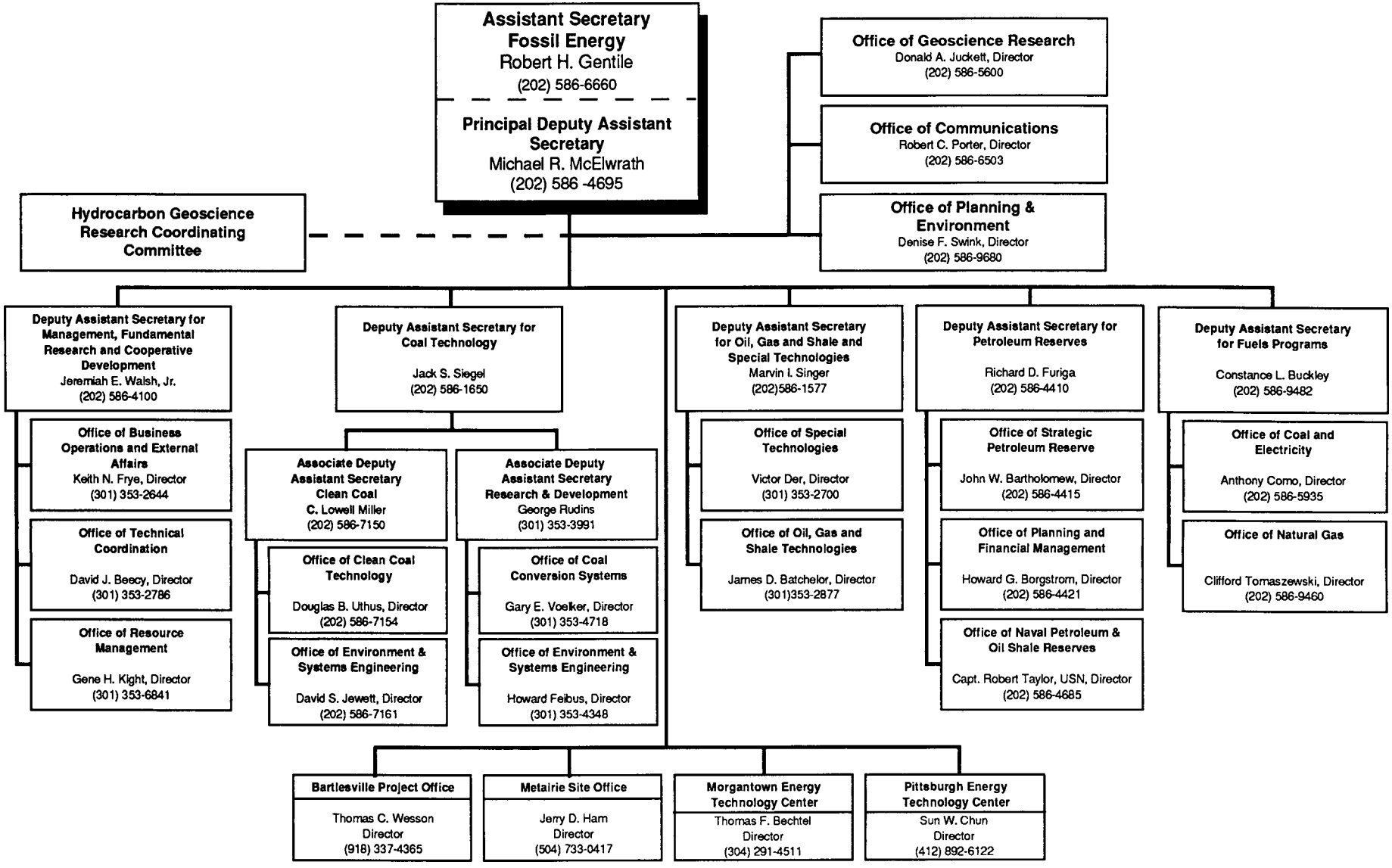
- Developing strategies and plans for programs in the recovery of natural gas from eastern gas shales, western tight gas sands, gas hydrates, and deep source gas in improved recovery from complex conventional reservoirs, and in the development of underground coal gasification;

- Developing strategies and plans for a program in shale oil production, conversion to liquid fuels, utilization of by-products, and related environmental impact mitigation;

- Developing strategies and plans for, and evaluating the advancement of the science and engineering technology base for, oil, gas and shale recovery and utilization;

- Coordinating, with the FE Office of Technical Coordination, appropriate levels of funding for advanced research in extraction and process technology for liquid and gaseous fuels;

Exhibit 1 - Organizational Structure for the Office of Fossil Energy



- Coordinating, with the Office of Geoscience Research, funding and program development in the application of geoscience for increasing the reserve base and recovery of oil and gas resources;

- Providing technical evaluation and coordination of research and development, both in-house and outside; and

- Providing an interface for congressional and government agencies regarding oil, gas, and shale programs.

2. Programs

The overall OGST program objective is to advance the science and engineering database needed by private industry to overcome the technical, economic, and environmental barriers that limit commercial development of domestic fossil energy resources. Specific objectives include the following:

- Expand the technically recoverable resource base;
- Increase resource recovery efficiency;
- Improve process predictability;
- Reduce process capital and operating costs; and
- Assure environmental acceptability.

The OGST program strategy focuses on extending petroleum and gas supplies through enhanced oil recovery, tar sand, and unconventional gas recovery technology development. The program also focuses on developing additional energy supplies through oil shale and underground coal gasification technology development. These latter two technologies provide methods to reach currently unused resources of oil shale and unmineable coal, thus enhancing domestic energy supply.

OGST supports scientific, engineering, and geologic R&D activities in the areas of:

- Resource evaluation;
- Process technology; and
- Environmental impact mitigation.

Program elements in the area of resource evaluation are focused on determining the extent, quality, and geologic characteristics of the resource. Work in this area will improve extraction efficiency, and reduce waste and, therefore, reduce the unit costs of recovery. Program elements in the area of process technology are focused on advancing the technical and economic feasibility of extracting and converting unconventional solid, liquid, or gaseous resources to marketable fuels. They include studies of the physical, chemical and engineering aspects of the entire systems to improve recovery efficiency and reduce capital and operating costs. Program elements in the area of environmental impact mitigation include characterizing the nature of the relevant

effluent streams and their impact on air, water, solid waste, and health and safety. In addition, this element covers the analysis of the probable success of mitigation techniques.

The OGST program objectives for specific programs are as follows:

Enhanced Oil Recovery Program

The program supports increased domestic production of oil from all types of U.S. resources (light and heavy oil, and tar sands) through extrapolation of improved geoscientific characterization of reservoirs to overall resource potential and the development of advanced oil recovery processes with emphasis on economic, efficient and predictable performance.

Unconventional Gas Recovery Program

The program focus is on improving the characterization of unconventional gas resources in the U.S., developing improved means of production and more accurate prediction of gas production from these resources, increasing the economic production from some conventional gas reservoirs, and exploring novel methods of conversion of gas to liquid fuels.

Oil Shale Program

The program purpose is to support the development of efficient, economically competitive and environmentally acceptable technology to produce liquid fuels from western and eastern oil shales.

Underground Coal Gasification Program

The program objective is to support the development of technically feasible and environmentally acceptable in situ technology for the production of combustible gases from unrecoverable U.S. coal resources.

3. Points of Contact

The points of contact and telephone numbers for DOE OGST Offices are given below:

a. Fossil Energy Headquarters, Oil and Gas Program Offices

Marvin I. Singer
Deputy Assistant Secretary for Oil, Gas, Shale and Special Technologies
U.S. Department of Energy
FE-30
Washington, DC 20585
(202) 586-1577

Office of Oil, Gas and Shale Technology
U.S. Department of Energy
FE-33
Washington, DC 20545

- James D. Batchelor, Director, (301) 353-2877
- George Stosur, (301) 353-2749, Program Manager, Enhanced Oil Recovery
- James R. White, (301) 353-2729, Program Manager, Unconventional Gas Recovery and Program Manager (Acting), Underground Coal Gasification
- James E. Burchfield (301) 353-2724, Program Manager (Acting), Oil Shale

b. Fossil Energy Field Offices

Areas of Major Responsibility

- ***Bartlesville Project Office***
  - Thomas C. Wesson, Director
    P.O. Box 1398
    220 N. Virginia Avenue
    Bartlesville, OK 74005
    (918) 337-4365

  - Robert M. Ray
    Program Coordinator
    Tertiary Oil Recovery
    Information System (TORIS)

  - Fred W. Burtch
    Program Coordinator
    Enhanced Oil Recovery

  - Alex B. Crawley
    Program Coordinator
    Advanced Extraction and Process
    Technology (AEPT)

- EOR, advanced exploratory research, research activities coordination.

- ***Morgantown Energy Technology Center***
  - Thomas F. Bechtel, Director
    P.O. Box 880
    Morgantown, WV 26507-0880
    (304) 291-4511

  - Hugh D. Guthrie, Director
    Extraction Projects Management Division
    (304) 291-4764

- Unconventional gas recovery, underground coal gasification, oil shale, tar sands.

- ***Pittsburgh Energy Technology Center***
  - Sun W. Chun, Director
    P.O. Box 10940
    Pittsburgh, PA 15236
    (412) 892-6122

  - Gregory J. Kawalkin
    Procurement Officer
    (412) 892-6039

- Procurement support to oil and gas program.

- ***Metairie Site Office***
  - Jerry D. Ham, Director
    Metairie Site Office
    900 Commerce Road East
    Metairie, LA 70123
    (504) 733-0417

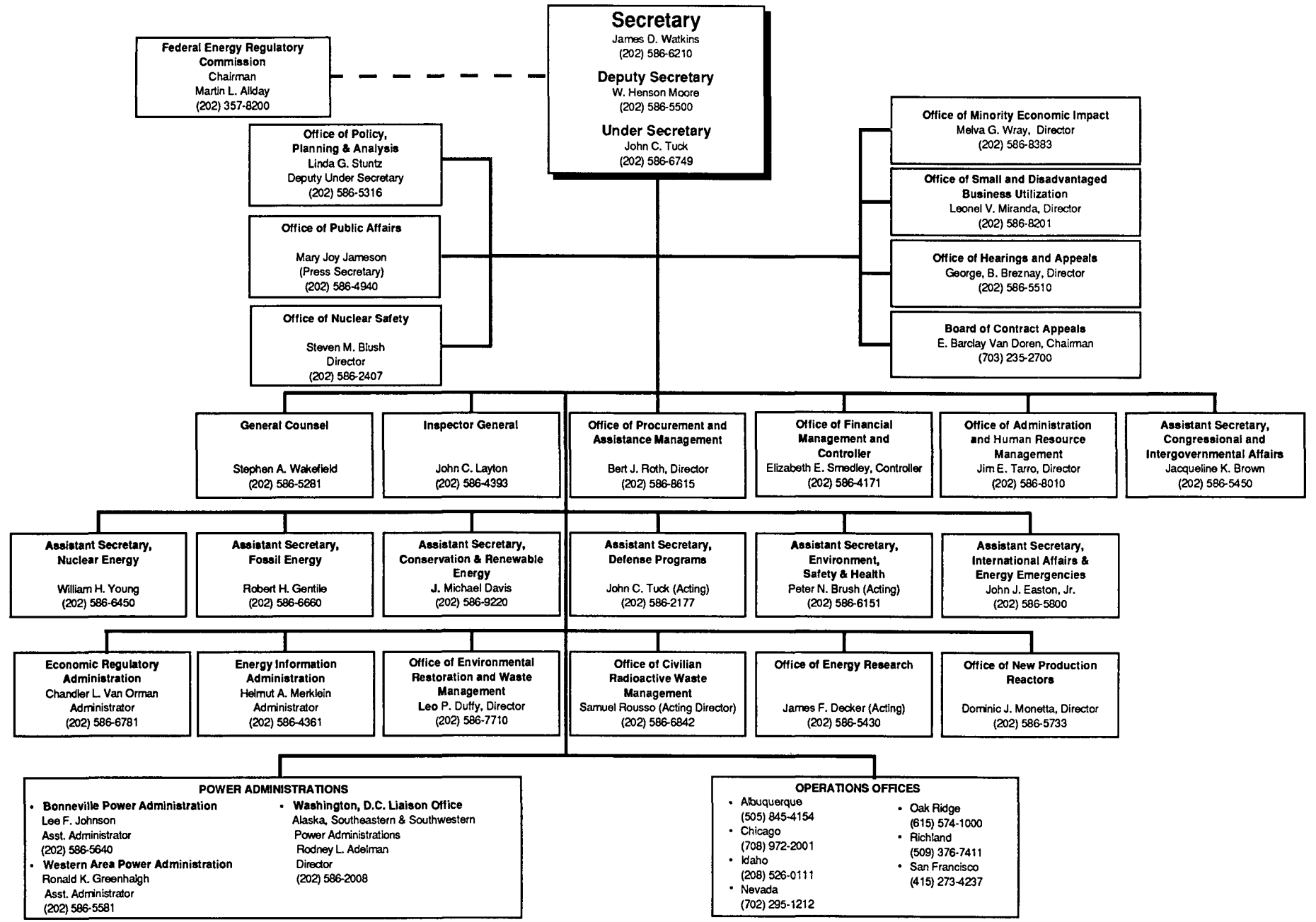
- Gravity oil drainage (oil mining), coordination of support of Historically Black Colleges and Universities (HBCU).

D. Other Related DOE Offices and Government Agencies

1. Department of Energy

In addition to OGSST, there are several other DOE Offices supporting the oil and gas programs on a department-wide basis including the Offices of Environment, Safety and Health; International Affairs and Energy Emergencies; Congressional, Intergovernmental, and Public Affairs; and the Director of Policy, Planning and Analysis. Exhibit 2 provides the organizational structure of DOE.

Exhibit 2 - Organizational Structure for the U.S. Department of Energy



a. Other FE Offices	Areas of Major Responsibilities
• Office of Geoscience Research - Donald A. Juckett, Director U.S. Department of Energy 1000 Independence Ave., SW Washington, DC 20585 (202) 586-5600	• Serves as the coordinator of hydrocarbon geoscience research. Chairs the Hydrocarbon Geoscience Research Coordinating Committee (HGRCC) which is developing a strategic plan and has representation from all pertinent DOE programs and other federal agencies.
• Petroleum Reserves - Richard D. Furiga Deputy Assistant Secretary U.S. Department of Energy 1000 Independence Ave., SW Washington, DC 20585 (202) 586-4410	
– Office of Naval Petroleum and Oil Shale Reserves Capt. Robert Taylor, USN, Director (202) 586-4685	– Plans, develops and operates a crude oil storage and distribution system for the armed forces during national emergencies.
– Office of Planning and Financial Management Howard G. Borgstrom, Director (202) 586-4421	– Provides planning and financial support to ensure overall goals and objectives of Petroleum Reserves are met.
– Office of Strategic Petroleum Reserves John W. Bartholomew, Director (202) 586-4415	– Plans, develops and operates a crude oil storage and distribution system to reduce U.S. vulnerability to supply interruptions.
• Management, Fundamental Research and Cooperative Development Jeremiah E. Walsh, Jr. Deputy Assistant Secretary U.S. Department of Energy 1000 Independence Ave., SW Washington, DC 20585 (202) 586-4100	
– Office of Business Operations Keith N. Frye, Director (301) 353-2644	– Develops business operations policy and guidance for FE.

- Office of Resource Management
  Gene H. Kight, Director
  (301) 353-6841
  - Provides support in the areas of budget and program initiation, management and administration, and communication.
- Office of Technical Coordination
  David J. Beecy, Director
  (301) 353-2786
  - Serves as principal technical advisor and coordinator for materials research, and advanced process technologies for liquid and gaseous fuels. Manages the Advanced Extraction and Process Technology program.

- Deputy Assistant Secretary for Fuels Programs
  Constance L. Buckley
  U.S. Department of Energy
  1000 Independence Ave., SW
  Washington, DC 20585
  (202) 586-9482
  - Responsible for administering regulatory programs for DOE

  - Office of Coal and Electricity
    Anthony Como, Director
    (202) 586-5935
    - Responsible for regulating exports of electricity, construction and operation of trans-border electric transmission lines and the Fuel Use Act.

  - Office of Natural Gas
    Clifford Tomaszewski, Director
    (202) 586-9460
    - Responsible for regulating exports and imports of natural gas under Section 3 of the Natural Gas Act.

b. Other DOE Offices

- Office of Economic Regulatory Administration
  Chandler L. Van Orman,
  Administrator
  U.S. Department of Energy
  1000 Independence Ave., SW
  Washington, DC 20585
  (202) 586-6781
  - Administers DOE's regulatory programs other than those assigned to the Federal Energy Regulatory Commission.

- Office of Energy Information Administration
  Helmut A. Merklein, Administrator
  U.S. Department of Energy
  1000 Independence Ave., SW
  Washington, DC 20585
  (202) 586-4361

  - Collects, processes and publishes data in the areas of energy reserves, production, demand, consumption, distribution and technology.
  - Provides data publication and distribution services within DOE, throughout the government, and to the public.
  - Serves as a clearinghouse for information on energy and coordinates the activities with DOE's Technical Information Center.

- Assistant Secretary for Environment, Safety and Health
  Peter N. Brush (Acting)
  U.S. Department of Energy
  1000 Independence Ave., SW
  Washington, DC 20585
  (202) 586-6151

  - Ensures that DOE programs are in compliance with environmental safety and health regulations.
  - Ensures the environmental and safety impacts of DOE programs receive management review.

- Office of Energy Research
  James F. Decker, Acting Director
  U.S. Department of Energy
  1000 Independence Ave., SW
  Washington, DC 20585
  (202) 586-5430

  - Advises the Secretary of Energy on energy research and development programs of DOE and use of multipurpose basic and applied research; administers DOE programs supporting university researchers; and monitors DOE R&D programs for deficiencies or duplication of effort.

- Office of Small Business Innovative Research
  Gerry P. Washington
  Program Spokesperson
  U.S. Department of Energy, ER-16
  Washington, DC 20545
  (301) 353-5867

  - Principal responsibilities include: (1) stimulate technological innovation; (2) encourage participation by minority disadvantaged and small businesses; and (3) increase private sector commercialization innovations.

c. <u>DOE Laboratories</u>

<u>Principal Areas of Technical Interest in FE</u>

- Danilo J. Santini
  Argonne National Laboratory
  9700 South Cass Ave.
  Argonne, IL 60439
  (708) 972-3758

  - Advanced environmental control technology, advanced combustion systems, materials technology, instrumentation development, assessment of environmental and economic issues.

- Leon Petrakis
  Brookhaven National Laboratory
  Upton, NY 11973
  (516) 282-3037
  - Advanced environmental control technology, advanced research and technology development, plume dispersion, atmospheric chemistry.
- Richard D. Holman
  Idaho National Engineering Laboratory
  P.O. Box 1625
  Idaho Falls, ID 83415
  (208) 526-1571
  - Advanced fossil materials development, biotechnology, microbial enhanced oil recovery.
- Thomas V. McEvilly
  Lawrence Berkeley Laboratory
  One Cyclotron Road, Mail Stop 50E
  Berkeley, CA 94720
  (415) 486-7347 or
  (415) 642-4494
  - Interwell reservoir imaging, seismic mapping, reservoir performance modeling, use of foams in enhanced oil recovery, high temperature downhole tools, environmental assessments and controls.
- Charles H. Biderman
  Lawrence Livermore National Laboratory
  P.O. Box 808
  Livermore, CA 94550
  (414) 422-4599
  - Complex fracture propagation computer modeling, remote sand lens fracture stimulation, complex rock mechanics and in situ stress research, explosive stimulation computer modeling, geostatistical evaluation of geologic and production data.
- Sandra J. Byrnes
  Los Alamos National Laboratory
  P.O. Box 1663
  Los Alamos, NM 87545
  (505) 667-5720
  - High temperature/pressure downhole tools, hydraulic fracture mapping, interwell seismic reservoir imaging, enhanced oil recovery tracer materials.
- Jo W. Culver
  Oak Ridge National Laboratory
  P.O. Box X
  Oak Ridge, TN 37831
  (615) 576-0226
  - Enhanced oil recovery, tar sands, oil shale, solid waste management, advanced environmental control technology, application of biotechnology, materials research.
- Walter W. Laity
  Pacific Northwest Laboratory
  Battelle Blvd.
  P.O. Box 999
  Richland, WA 99352
  (509) 375-2780
  - Atmospheric contaminant transport and fate, environmental and health effects, acid rain deposition, material and process research, statistical analysis, forecasting.

- Virgil L. Dugan
  Sandia National Laboratories
  P.O. Box 5800
  Albuquerque, NM 87185
  (505) 844-8735

- In situ rock mechanics, hydraulic fracture mapping, basic hydraulic and explosive fracturing research, high temperature downhole tool electronics, drilling applications.

2. Other Government Agencies

Several other federal government agencies conduct energy R&D programs through inter-agency working agreements in order to mutually benefit from technical and scientific information generated in areas such as energy resources, technology, environment, conservation, health and safety, economics and forecasting.

Complete descriptions of all federal government agencies and offices and their programs are included in ***The United States Government Manual*** (publication number is 1989 0-223-597 QL3) which can be obtained from the U.S. Government Printing Office, Superintendent of Documents (202/275-2951). Some of these are discussed below.

a. Environmental Protection Agency (EPA)

The EPA was created to provide coordinated and effective governmental action on behalf of the environment. Its objective is to abate and control pollution systematically, through the integration of research, monitoring, standard setting and enforcement activities. The agency activities are grouped under the following areas (further information can be obtained by calling the telephone numbers provided):

- Water
  - LaJuana S. Wilcher
    Assistant Administrator
    401 M Street, SW
    Washington, DC 20460
    (202) 382-5700

- Air and Radiation
  - William G. Rosenberg
    Assistant Administrator
    401 M Street, SW
    Washington, DC 20460
    (202) 382-7400

- Pesticides and Toxic Substances
  - Linda J. Fisher
    Assistant Administrator
    401 M Street, SW
    Washington, DC 20460
    (202) 382-2902

- Solid Waste and Emergency Response
  - Don R. Clay
    Assistant Administrator
    401 M Street, SW
    Washington, DC 20460
    (202) 382-4610

- Research & Development
  - Eric W. Bretthauer
    Assistant Administrator
    401 M Street, SW
    Washington, DC 20460
    (202) 382-7676

Under the Office of Research & Development, key offices include the following:

- Office of Technology Transfer and Regulatory Support
  Peter W. Preuss, Director, (202) 382-7669
- Office of Environmental Engineering and Technology Demonstration
  Alfred W. Lindsey, Acting Director, (202) 382-2600
- Office of Environmental Process and Effects Research
  Courtney Riordan, Director, (202) 382-5950
- Office of Health and Environmental Assessment
  William H. Farland, Director, (202) 382-7317
  - Environmental Criteria and Assessment Office
    26 W. Martin Luther King Drive
    Cincinnati, OH 45268
    Christopher T. DeRosa, Acting Director, (513) 569-7531
  - Environmental Criteria and Assessment Office
    MD-52, 3200 Highway 54
    Research Triangle Park, NC 27711
    Lester D. Grant, Director, (919) 541-4173

b. Department of the Interior (DOI)

The jurisdiction of DOI includes the conservation and development of mineral and water resources. Among the offices of possible interest are the following.

- Water and Science: This office manages programs that support the development and implementation of water and mineral policies and that assist in the development of economically and environmentally sound resource activities. For additional information contact:

  - U.S. Geological Survey
    National Center, Mail Stop 101
    Reston, Virginia 22092
    Dallas L. Peck, Director
    (703) 648-7411

  - U.S. Bureau of Mines
    2401 E Street, NW
    Washington DC 20241
    T.S. Ary, Director
    (202) 634-1300

  - Bureau of Reclamation
    18th & C Streets, NW
    Washington, DC 20240
    Dennis B. Underwood, Commissioner
    (202) 343-4157

- Land and Minerals Management: The activities of this office include onshore and offshore minerals management; fuel-related mineral data collection and analysis; surface mining reclamation and enforcement functions; operations management of minerals on the Outer Continental Shelf; and assessment of these frontier area mineral resources. For additional information contact:

  - Minerals Management Service
    18th & C Streets, NW
    Washington, DC 20240
    Barry A. Williamson, Director
    (202) 343-3500

  - Bureau of Land Management
    18th & C Streets, NW
    Washington, DC 20240
    Cy Jamison, Director
    (202) 343-3801

  - Office of Surface Mining Reclamation and Enforcement
    Room 233
    1951 Constitution Ave., NW
    Washington, DC 20240
    Harry M. Snyder, Director
    (202) 343-4006

c. Department of Labor (DOL)

The Mine Safety and Health Administration (MSHA) of DOL develops and promulgates mandatory safety and health standards and ensures compliance with such standards. For further information contact Wayne E. Veneman at (703) 235-1452, or write to:

Office of Information and Public Affairs
Mine Safety and Health Administration
Department of Labor, Room 601
4015 Wilson Boulevard
Arlington, Virginia 22203

d. Department of Commerce (DOC)

The Federal Nonnuclear Energy Research and Development Act of 1974 (Public Law 93-577) established a comprehensive national program for research and development of all potentially beneficial energy sources and utilization technologies. The purpose of the program is to provide an opportunity for independent inventors and small businesses with promising energy-related inventions to obtain federal assistance in developing and commercializing their inventions. The program is conducted by DOE, with assistance from the DOC's National Institute of Standards and Technology (NIST) in evaluating promising nonnuclear energy-related inventions, particularly those submitted by independent inventors and small companies. Inventions judged favorably by NIST's Office of Energy-Related Inventions (OERI) can obtain direct grants for their development from DOE.

DOE determines whether and how the recommended inventions should be supported and takes the necessary support action. DOE expects to support almost all NIST recommended inventions. Although individual grant or contract awards have exceeded $100,000, the average award is for $70,000.

For additional information, contact Maria Lancaster at (301) 975-5500 or write to:

Office of Energy-Related Inventions
National Institute of Standards and Technology
Gaithersburg, MD 20899

e. United States Coast Guard (USCG)

The Coast Guard is responsible for enforcing the *Federal Water Pollution Control Act* (33 U.S.C. 1251) and various other laws relating to the protection of the marine environment. The program objective is to ensure that public health and welfare and the environment are protected when spills occur. Under these laws, U.S. and foreign vessels are prohibited from using U.S. waters unless they have insurance or other guarantees that potential pollution liability for cleanup and damages will be met.

Other functions include providing a National Response Center to receive reports of oil and hazardous substance spills, investigating spills, initiating subsequent civil penalty actions when warranted, encouraging and monitoring responsible party cleanups, and when necessary, coordinating federally funded spill response operations. The program also provides a National Strike Force to assist federal On-Scene Coordinators in responding to pollution incidents. For further information, contact Robert M. Skall at (202) 267-0518 or write to:

U.S. Coast Guard Headquarters
Room 2104
2100 2nd Street, S.W.
Washington, DC 20593-0001

II. TYPES OF BUSINESS RELATIONSHIPS

The federal government does business with private sector organizations through a number of different instruments and procedures. The most important of these are outlined below and fall into the categories of financial and non-financial.

A. Financial

1. Commerce Business Daily (CBD) Announcements

The CBD, published daily by the U.S. Department of Commerce, lists all proposed and active federal government Requests for Proposals (RFPs) and other procurements, subcontracting leads, contract awards, and foreign business opportunities. Each RFP appears in the CBD only once. Potential proposers have at least 30 days prior to bid opening to respond.

A subscription to the CBD may be obtained from:

Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402-9371
(202) 783-3238

2. Notice of Program Interest (NPI)

The NPI is not a solicitation, rather it is a notice in the CBD and the *Federal Register* concerning areas of research and other areas where DOE hopes to receive unsolicited proposals from individuals and organizations. For a subscription to the *Federal Register*, contact the Superintendent of Documents (see previous paragraph).

3. Types of Financial Instruments

a. Non-Competitive Awards

1. Unsolicited Proposals

When an individual or organization, solely on its own initiative or as a result of an NPI, submits a specific proposal to perform work it is referred to as an unsolicited proposal.

In the proposal, the offeror presents objectives and pertinence of the proposed work to DOE, the rationale of the approach, the methods to be pursued, the qualifications of the investigators and the level of funding required to attain the objectives.

All fossil energy NPI proposals should be submitted to:

Patrick J. Neary, Manager
Unsolicited Proposal Coordination
Pittsburgh Energy Technology Center
P.O. Box 10940
Pittsburgh, PA 15236
(412)892-6202

The detailed requirements concerning format and content are available in the DOE pamphlet entitled "Guide for the Submission of Unsolicited Proposals," document number: DOE/MA-0095.

2. Sole Source Contracts

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 based have placed significant emphasis on the need for competition. In federal procurement, 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, noncompetitive awards occur as a result of the following:

- Unsolicited proposals or responses to an NPI;
- 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; and/or
- Broad solicitation for non-similar innovative responses.

The intention to make such an award must be adequately justified in writing prior to award.

b. Competitive Solicitations

1. 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. Award is based on price competition and a fixed price contract usually results.

2. Request for Proposals (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 gives the place, date and time for submission of proposals. The

evaluation, selection, negotiation and award are conducted in accordance with the provisions of the solicitation document as well as the Federal Acquisition Regulations (FAR) and the DOE Acquisition Regulations (DEAR). Either a cost reimbursement or a fixed price contract results from this process.

3. Program Opportunity Notice (PON)

A PON is principally used to solicit competitive proposals relating to non-nuclear energy demonstration projects where 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 the award of contracts, grants or cooperative agreements, and multiple awards may be made.

4. Program Research & Development Announcement (PRDA)

A PRDA is a solicitation announcement used to solicit a broad mix of research, development and related non-nuclear energy project proposals. While a PON is geared strictly to accelerating the demonstration of projects utilizing existing 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 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.

5. Small Business Innovation Research (SBIR)

The principal purposes of the SBIR program, mandated by Public Law 97-219, are: 1) to stimulate technological innovation; 2) to use small business to meet federal research and development needs; 3) to foster and encourage participation by minority and disadvantaged persons in technological innovation; and 4) to increase private sector commercialization innovations.

There are three phases to the SBIR program:

Phase I - Awards are made on a fixed price basis in amounts up to $50,000 for a period of performance of approximately six months. A new SBIR solicitation for Phase I awards is issued each year.

Phase II - A second award is made to firms with approaches to problems that appear sufficiently promising under Phase I. Phase II awards are in the amount up to $500,000 for a period of performance up to 24 months.

Phase III - Phase III is a term used to describe the commercialization outside of the SBIR program of technology that was conceived (Phase I) and developed (Phase II) within the SBIR framework.

Questions about the DOE SBIR program may be addressed to:

Mrs. Gerry P. Washington, Program Spokesperson
c/o SBIR Program Manager, ER-16
U.S. Department of Energy
Washington, DC 20545
(301) 353-5867

Requests for copies of the solicitations may be addressed to the SBIR Program Office at the above address, telephone (301) 353-5707.

6. Small Business Program and Set-Asides

A "Small Business" is a concern, including its affiliates, which is independently owned and operated, is not dominant in the field of operation in which it is bidding on government contracts, and can further qualify under the criteria set forth in regulations of the Small Business Administration.

Public Law 95-507 assists small business through special consideration known as set-asides. In a set-aside arrangement, either the individual contract or an entire class of contracts are made available for competition solely between small business firms with subsequent award to a successful small business bidder. Each CBD announcement indicates whether or not the subject procurement is a small business set-aside.

The set-asides are established independently by the various procurement offices and are reviewed each year under the guidance of the DOE Office of Small and Disadvantaged Business Utilization. Further information may be obtained by calling (202) 586-8201.

7. Small, Disadvantaged (Minority) Business

Small, disadvantaged firms receive the same special consideration as a small business in general. Further, Public Law 95-507 provides that sole-source contracts may be entered into with these firms under section 8(a) of this law. This process involves DOE entering into a contract with a firm using the Small Business Administration (SBA) as the prime contractor. For certified "8(a)" firms, the contracting process is more rapid.

Eligible firms are defined as being owned and operated by Black Americans, Hispanic Americans, Native Americans, Asian Pacific Americans, and other minorities or individuals deemed to be socially and economically disadvantaged.

Again, the CBD announcement will indicate set-asides for "8(a)" firms. For more information contact DOE's Office of Small and Disadvantaged Business Utilization, (202) 586-8201.

c. Other Details

1. Security of Proposal Information

Non-proprietary proposals should be submitted when possible. However, if this is not feasible, the proprietary portions of the proposal should be clearly marked in accordance with FAR 52.215-12, "Restriction on Disclosure and Use of Data" (April 1984). DOE is obligated to protect the confidentiality of properly marked proposal information. Copies of the FAR may be purchased from the Superintendent of Documents, Government Printing Office, Washington, DC 20402.

2. Report Requirements

Recipients of financial assistance or procurement contract awards will be expected to satisfy reporting requirements stipulated in the solicitation. The schedule of reports is arranged at the time of negotiations. The selection of appropriate reports, their frequency and the amount of detail vary based on factors such as the program objectives, amount of funding and type of instrument awarded.

For additional information refer to the following:

DOE Uniform Contracting Reporting System
Report Number: DOE/CR-0001/4
Stock Number: 061-000-00347-9

For a copy contact:

Superintendent of Documents
U.S. Government Printing Office
Washington, DC 20401

3. Data and Patent Rights

Small businesses and nonprofit organizations generally have the right to elect to retain title to inventions they make in the performance of DOE funding agreements (grants, contracts, and cooperative agreements) for experimental, developmental, or research work unless DOE determines that exceptional circumstances require a different disposition of rights.

In grants and contracts with other organizations, because of DOE's 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 a contract, normally reserving to the grantee or contractor a royalty free, nonexclusive revocable license for the use of such inventions. DOE may, however, waive its rights either in advance of contracting or after an invention is made. In addition, the contractor or grantee may request greater rights to individually identified inventions under DOE's waiver procedures and may request rights to such inventions in any foreign country in which DOE elects

not to seek patent protection. One example of DOE waiver is in a case where the DOE share of project cost is less than 50%, as was true in the Clean Coal Technology Demonstration Program projects. Policies and procedures on patents, data and copyrights are contained in DOE-PR 9-9.109-6, a copy of which may be obtained from Assistant General Counsel for Patents, Department of Energy, Washington, DC 20585.

4. Cost-Sharing or Cost-Participation

The decision as to whether contract or assistance agreement will include either a cost-sharing or cost-participation provision, respectively, is made on a case-by-case basis. Normally, DOE will fully fund the early phases of basic research and development programs. However, subsequent phases of these programs, which provide the performer with present or future economic benefits through commercialization, will require some form of cost sharing or cost participation.

5. Equal Opportunity Employment

All organizations receiving financial support from DOE are required to comply with the provisions of Executive Order No. 11246 of September 24, 1965, as amended, and with the rules and regulations, and relevant orders of the Secretary of Labor. A copy of the DOE Executive Order can be obtained from:

DOE Orders and Directives
Secondary Distribution
U.S. Department of Energy
1000 Independence Avenue, SW
GE-140
Washington, DC 20585

B. Non-Financial

1. Technical Consultation with DOE

For technical information related to various DOE programs and R&D activities, office directors and program managers can be contacted directly. The names, addresses and telephone numbers of respective offices were given under Section I.D.1.

2. Observation Visits to DOE Research Facilities

DOE's R&D facilities are located throughout the United States. Together, they form a nationwide network that includes large multi-program laboratories, energy technology centers and project offices. Each can be contacted directly to arrange for observation visits. See Section I.D.1.

3. *Availability of DOE Technical Reports*

Results of DOE-funded research are managed under the Office of Scientific and Technical Information (OSTI) in Oak Ridge, Tennessee. The address and phone number are:

Office of Scientific and Technical Information
Department of Energy
P.O. Box 62
Oak Ridge, Tennessee 37831
(615) 576-1301

OSTI collects and disseminates energy information resulting from DOE-funded research and development as well as relevant technical literature produced worldwide for use by the DOE community. DOE's scientific and technical information is available in the form of technical reports, on-line retrieval systems, and announcement publications. This information is shared with other government agencies and is made available to the private sector.

4. *DOE Oil & Gas Related Software*

The National Energy Software Center (NESC) located in Argonne, Illinois plays a central role in collecting, packaging, maintaining and distributing computer software and data compilations developed in the agency's program activities. According to DOE Order 1360.4A, the objective of the Center is to promote the sharing of unclassified scientific and technical computer software among DOE, DOE contractors, private industry, the public and foreign requestors. For further information, write or call Jan Carter at:

National Energy Software Center
Argonne National Laboratory
9700 South Cass Avenue
Argonne, Illinois 60439
(708) 972-7250

DOE's Bartlesville Project Office, located in Bartlesville, Oklahoma, maintains a collection of computer software and supporting documentation on oil-related activities. The software includes predictive models of EOR, BOAST II, simulation of production from wells with horizontal/slanted laterals, and a crude oil analysis data bank.

The predictive models allow calculation of incremental oil recovery and economics of various EOR processes, and can be used for rapid, inexpensive screening of large numbers of reservoirs for the most efficient EOR process. BOAST II, which simulates three-dimensional, isothermal, darcy flow of reservoir fluids, is used to address typical field production problems such as primary depletion studies and evaluation of secondary recovery waterflooding and displacement operations. The horizontal/slanted well program, a version of the original BOAST program, provides estimates of production from a reservoir using horizontal and/or slanted wells compared to standard vertical wells. The Crude Oil Analysis Data Bank (COADB) is a collection of more

than 9000 comprehensive analyses of the chemical and physical properties of crude oils, mostly domestic, but including selected international crudes.

Both the predictive models and BOAST II are available as mainframe 9-track tape or as a set of PC disks (IBM AT- or XT-compatible). The horizontal/slanted well program is available only as a mainframe tape (as of January 1990). COADB is available as a free on-line computer database, and also as a mainframe tape. For further information, write or call Herbert A. Tiedemann at:

U.S. Department of Energy
Bartlesville Project Office
P.O. Box 1398
Bartlesville, OK 74005
(918) 337-4293

The Morgantown Energy Technology Center (METC) maintains a comprehensive set of software systems for several Unconventional Gas Recovery (UGR) programs including eastern gas shales, western gas sands, methane recovery from coal, gas hydrates and deep source gas. These include both predictive models and data systems. The predictive models simulate gas production for a variety of production scenarios including using horizontal wells. These models are also capable of predicting the results of stimulating gas wells. The data systems include well data for 1.6 million oil/gas wells in the United States. METC also maintains process simulators to analyze the retorting of oil shale and processing of natural gas. The predictive models are used for conducting research at METC and when developed to a level applicable to other users, are made available through the National Energy Software Center (NESC). Currently, two reservoir models are available through NESC -- GAS3D2 (a single porosity, three-dimensional, single phase gas model) and SUGAR-MD (a dual-porosity, two-dimensional, single phase gas model). For further information, write or call James Mercer at:

U.S. Department of Energy
Morgantown Energy Technology Center
P.O. Box 880
Morgantown, WV 26505
(304) 291-4509

5. DOE Speakers

For public sector meetings on various issues related to oil and gas, DOE speakers are available to make technical presentations. For further information related to oil and gas speaker availability information, call Robert Porter, Director Office of Communication, Telephone (202) 586-6503 or contact:

James R. White
Program Manager
Unconventional Gas Recovery
Office of Oil, Gas, and Shale Technologies
(301) 353-2729

George Stosur
Program Manager
Enhanced Oil Recovery
Office of Oil, Gas and Shale Technologies
(301) 353-2749

6. Administrative Guidance in Preparing Proposals

DOE's Office of Document Control Specialist provides assistance on information concerning requests for Proposals (RFPs) that are listed in the *Commerce Business Daily*. All requests must be in writing to U.S. Department of Energy, PO Box 2500, Washington, DC 20013-2500.

DOE's Office of Procurement and Assistance Management serves as a central point of contact to discuss business matters related to DOE procurement and policy procedures and other general business. Further information can be obtained by calling (202) 586-8182.

7. Information Services Available Through the Energy Information Administration

The EIA offers numerous information services such as, statistical and projected information for the petroleum and gas industry, including crude oil, refined product and natural gas prices; petroleum and natural gas resources and production; and other relevant information on distribution and transportation of oil and gas. Refer to Section I.D-1.b for more information on EIA contacts.

III. REFERENCE PUBLICATIONS FOR ADDITIONAL INFORMATION

1. U.S. Department of Energy, *Doing Business with the Department of Energy*, Office of Small and Disadvantaged Business Utilization, April 1987 (DOE/MA-0271).

2. U.S. Department of Energy, *Annual Report to Congress*, 1987, [DOE/S-0010(87)].

3. U.S. Department of Energy, *Energy Information Directory,* Energy Information Administration, June 1988, [DOE/EIA-0205(88/2)].

4. U.S. Department of Energy, *Capsule Review of DOE Research and Development and Field Facilities*, Office of Energy Research, September 1986 (DOE/ER-0305).

5. U.S. Department of Energy, *Technology '88: U.S. Department of Energy R&D Laboratory Technology Transfer Program*, Annual Report, December 1988.

6. U.S. Department of Energy, *Fossil Energy R&D at the Morgantown Energy Technology Center*, Office of Fossil Energy, 1985.

7. U.S. Department of Energy, *Databases Available at the Energy Library*, December 1986 (DOE/MA-0247).

8. U.S. Department of Energy, *Guide for the Submission of Unsolicited Proposals, Procurement and Assistance*, June 1983 (DOE/MA-0095).

9. U.S. General Services Administration, *Doing Business with the Federal Government*, October 1986.

10. Office of the Federal Register, *United States Government Manual 1989/90*, National Archives and Records Administration, July 1989, (0-223-597QL3).

11. Federal Yellow Book, *A Directory of the Federal Departments and Agencies*, Volume XXV, No. 2, Spring 1989.