
CROSSCUTTING

Programs

- *International*
- *Natural Gas Import and Export*
- *Natural Gas Market Access*
- *HBCU*
- *Hispanic Internship*



OIL AND GAS RD&D PROGRAMS



The ONGPT Crosscutting Programs comprise the International Program, Natural Gas Import and Export Program, and other programs. Other programs include the Natural Gas Market Access Program for women and minority-owned business enterprises and small and disadvantaged businesses, Historically Black Colleges and Universities (HBCU) Program, and the Fossil Energy Hispanic Internship Program.

The International Program goal is to promote business opportunities for export of U.S. oil and gas technologies and services. This goal is achieved through bilateral and multilateral efforts with other governments and multilateral agencies, and collaborations with international organizations. Under the Natural Gas Import and Export Program, ONGPT administers the natural gas imports and exports, under Section 3 of the Natural Gas Act of 1938, maintains statistics, and conducts analyses on North American natural gas trade.

The other programs respond to the Department's diversity goals and initiatives. For example, the Natural Gas Market Access Program goal is to increase natural gas industry participation of women and minority-owned business enterprises and small and disadvantaged businesses by identifying opportunities to market their capabilities. This program has been in place since 1996. The HBCU Program, established in 1995, provides internship opportunities for students from HBCUs and other minority institutions at Fossil Energy Headquarter and Field facilities. The Fossil Energy Hispanic Internship Program, initiated in 1998, also provides internship opportunities for Hispanic students at Fossil Energy Headquarters.

International Program

DOE's Strategic Plan (September 1997), Office of Fossil Energy Strategic Plan (March 1998), and the Comprehensive National Energy Strategy (April 1998), all recognize the importance of environmental and security issues resulting from increasing worldwide energy demand, as well as the economic benefits to the U.S. from increased energy trade. In particular, three strategies are stressed in these documents that are key to energy-related Federal international activities:

- Reduce the vulnerability of the U.S. economy to energy disruptions by diversifying sources of oil available to world oil markets;
- Promote deployment of clean and efficient energy systems; and
- Promote international science and technology collaboration to avoid duplication and maximize the national benefits of Federal RD&D efforts.

During this decade, the world has witnessed a transformation of world energy markets – fueled primarily by changes in the emerging economies. These emerging economies are both suppliers and competitors for petroleum resources in global energy markets. To sustain development, emerging economies are increasingly relying on the world financial markets and the international petroleum industry to provide

expertise, finance, and technology for finding and developing resources, building energy infrastructure, and investing in refining and petrochemical facilities that serve these markets.

Oil, which is expected to be the most widely-used fuel worldwide for the foreseeable future, has been historically the fuel most vulnerable to supply disruption. A long-term trend toward increasing concentration of international exports among Persian Gulf countries has raised concerns among energy policymakers.

International demand for natural gas, the cleanest, lowest carbon fossil fuel, is growing rapidly; but meeting this demand will require attention to potential supply and infrastructure and competitive market development. Lack of infrastructure is especially important in developing countries where the energy growth rate is highest, and major efforts are reducing gathering, transmission, and distribution constraints.

ONGPT, through a unique combination of operational, technical, cross-border regulatory experience and government legitimacy, is able to provide technical advice, support, and facilitation to other governments and the industry, which contributes to improved economics and cleaner environments in the development and use of natural gas and oil.





ONGPT International Program

The need for government technical expertise in the oil, gas, and power industries has increased dramatically in the last five years, as competition between industries and governments for these new emerging markets has intensified. ONGPT, in cooperation with the Office of Policy and International Affairs, supports DOE activities in international market analyses and promotion of business opportunities for export of U.S. energy technologies and services. The international program drivers include the National Petroleum Council's Future Issues study (August 1995), and the Comprehensive National Energy Strategy (CNES). The NPC study recommended that DOE encourage development of as wide a range as possible of foreign import sources; and the CNES calls for promoting development of open, competitive international energy markets.

ONGPT participates in bilateral and multilateral efforts with other governments and multilateral agencies to ensure that U.S. interests are adequately represented in the global marketplace. ONGPT has several international initiatives and ongoing programs, some of which are developed through bilateral government programs, collaborating with the International Energy Agency (IEA) under the Asia Pacific Economic Cooperation (APEC) organization, and the Summit of the Americas.

Program Objectives

The principal objectives of ONGPT's oil and natural gas international activities are to:

- Provide guidance and input for identification systems that classify countries as highly probable opportunities for the U.S. petroleum industry;
- Create procedures for working with countries to allow greater participation of the U.S. petroleum industry, as well as promoting transparency in the procedures of countries where U.S. industry has difficulty in achieving competitive bidding; and
- Develop programs to introduce U.S. technologies into the petroleum sectors of foreign countries that can, in a competitive manner, improve the efficiency of foreign oil and natural gas production while improving environmental sensitivity.

The ONGPT program also supports international activities of other Federal agencies and their missions, as described below:

- State Department: foreign policy formulation and implementation. U.S. Agency for International Development (within the State Department) provides support for economic development and humanitarian assistance to advance U.S. economic and political interests overseas.

- Office of U.S. Trade Representative: trade policy formulation and implementation.
- Commerce Department: trade advocacy, implementation of National Export Strategy, including enforcement of trade laws and agreements. International Trade Administration (within Commerce) is the focal point for these activities.
- Trade and Development Agency: support of U.S. companies pursuing overseas business opportunities.
- Department of the Interior/Department of Transportation: international mission to provide information on U.S. experience in Federal lands, regulation, and oil spill planning and cleanup oversight.

Customers

The international activities support U.S. consumer interests in the major areas of energy security, energy market diversity, deployment of clean energy technologies, improving trade, and international science and technology through engaging the following customers:

- The U.S. petroleum industry (including integrated majors, independents, consultants and the service sector), who provide financing, technology, services, equipment and staff in the international arena, and who rely on DOE to provide information and facilitation in dealing with foreign governments.
- Governments in emerging economies that rely on DOE for information and facilitation of interactions among interested parties for input into legislation, regulation, and practices, which provide a sound basis for policy development and operations in their countries.
- State petroleum companies rely on DOE as an “impartial broker” of information and technology in evaluating their commitment of resources to partnership ventures with U.S. companies.



Goals and Priorities

The DOE Strategic Plan recognizes the importance of environmental and security issues, which result from increasing worldwide energy demand as well as the economic benefits to the U.S. from increased energy trade. Three goals are stressed that are key to ONGPT international activities:

- Reducing the vulnerability of the U.S. economy to energy disruptions by diversifying sources of oil available to world oil markets;
- Promoting deployment of clean and efficient energy systems; and
- Promoting international science and technology collaboration to avoid duplication and to maximize the national benefits of Federal RD&D efforts.

ONGPT international activities supporting these strategies fall into the following general categories:

Administration Commitments: Non-discretionary activities that ONGPT participates in as a result of Administration commitments include:

- Ongoing multilateral activities such as the International Energy Agency, Asia-Pacific Economic Cooperation, and Summit of the Americas, which support all of the strategies and can be accommodated in the normal planning/budget cycle; and
- Other initiatives, such as the US-South Africa Binational Commission, US-Ukraine Binational Commission, and the US-Russia Binational Commission, which often cannot be anticipated sufficiently in advance to plan for adequate funding.

ONGPT Discretionary Activities: Activities supporting DOE international objectives, including:

- Market-conditioning activities to help ensure that laws, regulations, policies, and business practices are in place in promising countries and regions that promote U.S. trade and other energy-related objectives; and
- RD&D collaboration and information-sharing to promote development and use of clean and efficient fossil technologies.

For discretionary activities, there are many potential international areas where organizational resources can be deployed. A major challenge is to set priorities by determining where the largest benefits can be achieved.

Selected ONGPT International Activities

Since 1979, DOE and the International Energy Agency have been cooperating under an Implementing Agreement on enhanced oil recovery. ONGPT has been a sponsor of the International Center for Heavy Oil and Tar Sands (ICHOTS), formerly the United Nations Institute for Training and Research (UNITAR) Centre for Heavy Crude and Tar Sands, a source of information for resources development and utilization, and for addressing environmental concerns.

Also, since 1979, DOE has had a Bilateral Agreement with Venezuela, which focuses on activities associated with characterization, production, and upgrading of heavy and extra heavy oil. Collaboration includes information exchange, research, technology transfer, and training. Within the expanded scope of the Memorandum of Understanding between DOE and the Venezuelan Ministry of Energy and Mines, ONGPT will initiate discussions of environmental initiatives and energy policy activities outside oil- and gas-related policy.

In November 1998, ONGPT led the planning and implementation of the US/China Oil and Gas Industrial Forum, co-sponsored by the U.S. Departments of Energy and Commerce, in Beijing, China. This Forum identified policy and operational issues associated with access to all parts of China's markets and

natural gas and oil policy in China as the working areas for a second forum. The second forum, to be held in July 1999, in Houston, Texas, will bring together government and industry officials from both countries to promote an exchange that will assist China in its efforts to secure reliable and economical sources of oil and natural gas.

Fossil Energy/ONGPT co-organized, along with the Office of Policy and EPA, a US-Russian government workshop on management of wastes for offshore oil and gas operations in Moscow (April 1998). The primary purpose of the workshop was to provide information to the Russians on western regulations and practices concerning disposal of wastes resulting from offshore oil and gas exploration and production.

ONGPT played a key role in meetings with the Brazilian government and industry executives (April 1998) to gain insight into the privatization process in the Brazilian electric power market, and to promote cooperation and support for a regional study of South American electricity markets. DOE and the Comision de Integracion Electrica Regional (CIER), Montevideo, Uruguay, are undertaking a study of regional electricity transmission and bulk power reliability and quality of service issues for South American electricity markets. The study would lead to developing operational, technical, and regulatory standards and policies that facilitate electricity transactions across national borders.

In cooperation with Independent Petroleum Association of America (IPAA), the Instituto Argentina del Petroleo y del Gas, and industry associations representing the independent oil and gas producers, ONGPT organized a workshop in Houston, Texas, in January 1998. This meeting served as a forum for independent oil and gas producers of the U.S. and Argentina to discuss potential business opportunities. A follow-up workshop is planned to be held during 1999 in Buenos Aires, Argentina.

ONGPT is a member and sponsor of the International Centre for Gas Technology Information (ICGTI or GTI), which provides an international forum on gas technology information to meet global market needs. The gas marketplace of the twenty-first century will be more global and more competitive than ever before. Information technology – quick access to reliable, comprehensive business intelligence – will mark the difference between success and failure. Gas Technology Information, Inc., a subsidiary of the Gas Research Institute in the U.S., operates ICGTI on behalf of member countries and the International Energy Agency. ICGTI has developed and continues to enhance its information exchange system, GTI Online (www.icgti.org), which provides user-friendly access to gas technology information.

GTI Online also provides an online link among gas technology experts in the 15-member countries – Australia, Brazil, Canada, Denmark, Japan, the Netherlands, New Zealand, Poland, Portugal, Russia, Spain, Sweden, Trinidad and Tobago, the United Kingdom, and the United States.

The Western Hemisphere Oil and Gas Environmental Forum is a cooperative effort between the private and government-owned oil and gas companies in the U.S. and Latin America. The Forum fosters industry cooperation to improve the health, safety, and environmental performance of oil and gas activities throughout the hemisphere. ONGPT's role had been to facilitate this process and provide support until the activity became self supporting in 1996. The Forum participants have associated themselves with the Energy Initiative in the Summit of the Americas. Goals of the Forum are information exchange and contacts. The Forum provides an opportunity for developing industry-wide positions on environmental issues to engage more effectively in dialogues regarding regional and global environmental impacts.

North American companies are familiarizing themselves with the new operating environment as they enter into production and production-sharing agreements with their Latin American

counterparts. The Latin American companies are gaining insight into corporate environmental management systems, and how to effectively meet new regulations. Technical areas addressed have included: upstream environmental impact assessment, management systems, and performance indicators. Future topics include downstream issues, safety, crisis management, interaction with non-governmental organizations (NGOs), platform decommissioning, ISO 14,000, and contingency planning. DOE presently participates as an invited observer. There have been 11 official meetings of the Forum.

With financial support from the U.S. Agency for International Development (USAID), DOE is providing technical assistance to the Ukrainian Government with respect to pending Production Sharing Agreement Legislation. Under that assistance, DOE has provided legal expertise to improve the first draft of the legislation, drafted the enabling legislation, and held an educational seminar for members of the Ukrainian Parliament. The September 1998 educational seminar explained the complex provisions of the pending Production Sharing Agreement Legislation, and helped Ukraine Parliament Deputies understand the implications of its passage for attracting the needed investment in this critical sector, while providing jobs, increasing revenues into the national treasury, and reducing the balance of payments. With new funding from USAID expected in

January 1999, DOE will continue to provide legal expertise for proposed changes and amendments to the draft legislation. ONGPT will hold additional seminars to help the Ukraine Parliament pass the best possible legislation.

A 1999 workshop, co-sponsored by DOE's Office of Fossil Energy, Office of Policy, and the Ukraine National Academy of Science, is being planned to develop a Black Sea regional oil spill emergency response mechanism. This workshop is being planned by an interagency working group on Black Sea energy-related environmental issues. The workshop has been established to assist the six littoral states' efforts to implement multilateral agreements with respect to the Black Sea. Goals include a proactive response to environmental issues associated with increased economic and energy development in the region, including the development and transport of petroleum resources, especially from the Caspian region. The workshop will bring together decisionmakers responsible for environmental issues, and will provide them with tools to encourage dialogue on a specific plan for cooperation in responding to oil spills.

Other Programs

Natural Gas Import and Export Program

Section 3 of the Natural Gas Act of 1938 (NGA) requires the Federal Government to issue orders approving or denying applications to import or export natural gas. This statutory responsibility has been given to DOE, and subsequently redelegated to the Office of Fossil Energy. Within ONGPT, the Office of Natural Gas and Petroleum Import and Export Activities, which is responsible for authorizing natural gas imports and exports, collects data and reports detailed volume and price data on all international natural gas trade involving the United States. Authorizations are issued on a non-discretionary basis and involve both imports and exports of natural gas by pipeline from Mexico and Canada, as well as exports of LNG to Japan, and LNG imports from Algeria, Trinidad and Tobago.

Each natural gas importer/exporter is required to file four reports per year to describe its quarterly import and export activities. Data collected from the companies are used in compiling the *Natural Gas Imports and Exports Quarterly Report*. Principal reasons for collecting the data are: (1) to ensure that importers and exporters are complying

with the terms of their authorizations; (2) to monitor the effects of the North American Free Trade Agreement on cross-border gas trade; and (3) to improve the capability of the industry and government to respond to any future energy emergency-related supply problem. Collection of gas import and export statistics are valuable to DOE and others in performing various types of analyses. Accurate and timely statistics on international gas trade are becoming increasingly important, because of the growing role of imports in providing sufficient gas supplies to accommodate the rapid growth in gas demand in this country. For example, in 1986, imports represented 4.2 percent of total U.S. gas consumption; however, a decade later, in 1997, imports equaled about 13 percent of consumption.

Import and export statistics are relied on by many Federal and State agencies, as well as DOE offices, for timely and complete information on international gas trade. Federal and State agencies that use the data include: Department of State; Bureau of Labor Statistics, Commerce Department; Customs Service, Treasury Department; Labor Department; and State energy offices and public utility commissions.

Within DOE, the principal users of the data include the Federal Energy Regulatory Commission and the Energy Information Administration.

EIA, which is the primary office within DOE responsible for energy statistics and analyses, uses the data in its National Energy Modeling System, as well as various publications, such as the *Natural Gas Monthly* and *Natural Gas Issues and Trends*. In addition to government agencies, other customers of the data include trade associations, trade journals, consultants, and energy companies.

Natural Gas Market Access Program

The production, transportation, and marketing of natural gas is a \$90 billion per year industry. Because of the capital-intensive nature of the industry and an industry trend toward highly capitalized companies, women and minority-owned business enterprises (WMBEs) and small and disadvantaged businesses have had difficulty entering and competing in the natural gas marketplace.

To address the issue of expanding the energy marketplace for WMBEs in the natural gas industry, DOE, with the cooperation of the American Gas Association and Washington Gas, on July 18, 1996, sponsored a seminar, *Strategies for Tomorrow's Natural Gas Industry: A "How To" Workshop for Minority Entrepreneurs and Industry Personnel*. The seminar and a Minority Business Exposition, held the following day, were attended by approximately 200 representatives of the minority business community, as well as natural gas producers, marketers, gas utilities, and the banking and finance community.

In 1996, DOE announced the creation of an outreach strategy to assist WMBEs in developing business opportunities in the natural gas industry. DOE's outreach strategy, for the Natural Gas Market Access Program for women and minority-owned business enterprises and small and disadvantaged businesses, initiated ongoing dialogues

between the natural gas industry-producers, marketers, pipeline companies, gas utilities, banking and finance industries, Federal and State agencies, and the minority business community.

The purpose of the Market Access Program is to expand marketplace opportunities and coordinate DOE's support for WMBEs and small and disadvantaged businesses seeking to compete in the natural gas marketplace. The program goals are to significantly increase WMBE participation in the natural gas industry by educating producers, gas utilities, and banks about the benefits of diversifying their supplier base.

Program strategies include the following:

- Increase low-cost credit resource opportunities for WMBEs that eliminate credit and financing risks of gas producer, gas utility, and banking decisionmakers by encouraging the natural gas industry to utilize the Funds Transfer Agent Agreement (FTAA);
- Submit the FTAA to the Gas Industry Standards Board (GISB), to be included as a standardized method of payment on the natural gas industry's standardized *GISB Model Short-Term Sale and Purchase of Natural Gas Contract* (adopted by the GISB Executive Committee on January 9, 1998); and
- Identify opportunities for minority firms to market their services to the Federal government.

Program goals include the following:

- Increase CEO and Senior Executive support from the natural gas industry for the Program;
 - Encourage natural gas producers and purchasers to coordinate sales and purchasing activities with their women and minority business development offices;
 - Work with various State Utility Commissions to encourage local distribution companies to buy gas from women and minority-owned business enterprises;
 - Coordinate minority business participation in natural gas industry conferences, trade fairs, seminars, and workshops;
 - Aggressively advertise and promote the DOE's natural gas minority business development activities; and
 - Increase the number of minority business development programs in the natural gas industry.
- In assisting business enterprises for capital formation and identifying marketing opportunities, the Natural Gas Market Access Program will:
- Work with financial institutions and the natural gas industry to develop alternative financial instruments or services for women and minority-owned businesses (FTAA accepted by GISB and banking community);
 - Incorporate alternative financing instruments into industry and government gas purchase contracts;
 - Provide an on-line WMBE Web site and information clearinghouse to advise minority business of emerging market opportunities (*www.wmbe.doe.gov*);
 - Assist minority business in identifying opportunities to purchase a working interest in natural gas production, gathering, and storage facilities; and
 - Encourage Federal and State banking authorities to incorporate alternative financing instruments to meet the Community Reinvestment Act goals. (The U.S. Treasury Department, Office of Comptroller of the Currency, ruled on November 25, 1998, that the FTAA may receive favorable consideration as a Community Development service under the Community Reinvestment Act regulations.)

FTAA is an innovative way for women and minority-owned business enterprises to satisfy the capital requirements of the natural gas marketplace.

Historically Black Colleges and Universities (HBCU) Program

The objective of the HBCU program is to strengthen the capacity of black institutions in oil- and gas-related disciplines, especially in the areas of technology research and development, technology transfer, energy systems, infrastructure development, and outreach. An important feature of the Headquarters Fossil Energy HBCU program is the Internship Program, which was established as a pilot program in 1995. The program provides diverse opportunities to the African-American students by integrating their academic knowledge with field applications, improving their technical competitiveness, and helping them gain positive work experience through a ten-week summer internship program. In 1997, the internship program was expanded to include other minority institutions (OMIs).

HBCU Internship Program Goals are to:

- Provide opportunities for students to enhance their educational experience in disciplines critical to Fossil Energy's mission;
- Provide positive work experience that will enhance students' perception of the Federal Government and DOE;
- Develop highly skilled graduates who may choose to pursue careers within DOE;

- Provide opportunities for students to gain professional experience and network in the oil and gas industry and government;
- Place students in workplace positions related to their field of study; and
- Contribute to achieving DOE's diversity goals.

Goals of the Headquarters Fossil Energy HBCU Internship Program are to forge new frontiers, advance excellence in education, and diversify the high technology oil and gas industry work force by establishing effective partnerships with HBCU institutions. Its purpose is to provide an opportunity for participating students to integrate their academic knowledge with field applications, improve their technical competitiveness, and enhance their marketability upon graduation.

The Program requires participating students to make a 10-week internship commitment for at least one summer. Students may undertake assignments at either DOE Headquarters in Washington, D.C., a DOE oil and gas field site, or a National Laboratory. The program is targeted for college students entering their junior year, or first year students pursuing a Master's degree. To date, a total of 52 students have participated in the HBCU internship program.

The Headquarters HBCU Internship Program differs from other Fossil Energy internship programs because it does not focus primarily on research. The program provides real-world opportunities to enhance educational and practical experiences for students pursuing academic degrees in disciplines such as geology, engineering, chemistry, environmental sciences, business administration, mathematics, and related disciplines. These disciplines are important building blocks for career advancement in the oil and gas industry, and are critical to Fossil Energy programs. The Internship Program offers a unique opportunity for students to apply their knowledge and skills and gain real-world experience at oil and gas facilities.

A major outreach effort during Fiscal Year 1998 resulted in expanding the scope of the program to include: partnerships with the energy industry on a 50-50 cost-share basis; an increase in the number of participating universities; and development and posting of an Internet site. The HBCU Internet site can be accessed through www.fe.doe.gov (see "Educational Info" directory).

The Fossil Energy Hispanic Internship Program

The Office of Natural Gas & Petroleum Technology is also a sponsor of the Fossil Energy Hispanic Internship Program. The Fossil Energy Hispanic Internship Program (Program) is an element of the Department's Hispanic Outreach Initiative. During the first year, four interns were sponsored by the program, and it is planned that eight students will be offered internships for the 1999 program.

The Program was initiated in the Summer of 1998. Although the program was initiated during the summer, the objective is to conduct a year-round internship program, thereby enabling greater access by students. The Program represents a partnership with the Office of Management and Administration (formerly Office of Human Resources and Administration) and institutions of higher learning that include a large percentage of Hispanic students.

The Program has been endorsed by the Hispanic Association of the Department of Energy (HADOE) as an excellent example of the type of program in which the Department should be involved, to further the goals of DOE's Hispanic Outreach Initiative. The Program represents the first effort of this type within DOE.

The Office of Economic Impact and Diversity reports that FE is the first program element at HQ to initiate implementation of the education component of the Hispanic Outreach Initiative.

Candidates from colleges and universities in the U.S., with a minimum grade point average requirement of 3.5, are eligible for participation in the program. Students are required to perform a specific technical assignment related to fossil fuels, and students report on their assignment at the end of the term as part of the *Fossil Energy Hispanic Internship Program Technical Forum*.

